

Study of an Implementation of  
Water Quality Management Programs  
on Area Trust Lands  
by Jane Wells

Branch of Rights Protection Report  
April 30, 1986

Introduction:

In the spring and summer of 1984, a review of water quality standards for streams on Trust Lands within the Albuquerque Area was begun by Greta Dickerson in this Branch. Her review included correspondence with the Tribal Governors for agreement of their actual use of their perennial streams whose standards for water quality were designated by the Surveillance Section of the New Mexico Environmental Improvement Division (EID). Four Pueblos responded. There is the need for all Pueblos to attain or maintain their use of Primary Contact Recreation (PCR). Attached is a list of stream standards in use by New Mexico EID and the corresponding water quality criteria (Appendix A). A base map showing the EID segmented perennial reaches of streams in New Mexico continues to be updated (figure 1).

The evaluation of surface and ground waters of the United States in the past has required cooperation of state agencies (EID) and the Federal Government (EPA). Because the Indian tribes represent sovereign states they control the use and quality of water on their lands. However, the quality of water upstream from them may not support their uses, such as for swimming (PCR) and irrigation. The EID and EPA have bypassed an important link, represented by the Indian tribes, in their system of protecting and analyzing surface water based on existing uses and natural stream conditions.

One stream segment may support a variety of uses but each of these uses may require differing water quality standards. Should an upstream standard identify uses which require water of a quality that will not support an existing downstream use then the downstream use may not be attainable due to the existing water quality. Users may have impaired water quality and fewer designated uses. Historically, many tribes require primary contact with water for religious, ceremonial, fishing and recreation uses. Primary contact requires more rigid standards than most designated uses and remains a major key to maintaining good quality water for the Pueblos perennial surface waters.

More recent conversations and correspondence with EPA, EID and some BIA natural resources managers (SPA, Zuni and Ramah) has helped to define a basic point of view of each group. The EPA maintains an attitude of supervision, regulation, and special enforcement of the Clean Water Act with the states.



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The State Agencies, represented by the Water Quality Control Commission and the Surveillance and Standards Section of the EID, protects New Mexico's surface waters by designating the stream uses and prescribing water quality standards necessary to sustain the designated uses. Furthermore, the EID implements the water quality standards by establishing and requiring controls on the discharge of polluting materials to the surface waters. Standards are derived and maintained by a water quality assessment program which includes field sampling and water quality analyses of the surface waters.

Communications with several of the BIA Natural Resources managers have produced an interest in maintaining or improving water quality to correspond to actual tribal uses. The Acoma and Laguna Pueblos have filed suits against various defendants regarding the pollution and subsequent degradation of the Rio San Jose waters. Rights Protection is assisting these Pueblos in obtaining and maintaining good water quality for their existing uses. Even though Zuni and Ramah Navajo Trust lands have no perennial surface waters, this surface-water-protection scheme could be compared to ground-water-protection schemes which are being addressed on a National scale. For example, the EPA has provided funds for sole source aquifer studies (Safe Drinking Water Act, Section 1424E). These studies seek to describe a community's domestic supply of water. If at least 50% of a community water supply is from a specific aquifer, that aquifer is a principal source of that water supply. A principal or sole-source aquifer is protected against pollution by specific EPA rules.

BIA's position regarding NPDES permit NM-0020737 (for the Grants Sewage Treatment Plant) was recently given at an EPA hearing in Grants, New Mexico (attachment 1). Acting in its Trust Responsibility, BIA issued a request to change the existing stream standards for more stringent water quality limits (attachment 2) in order to protect the water quality of the Rio San Jose for irrigation and religious (PCR) uses by the Pueblos of Acoma and Laguna. However, of primary importance in establishing control of the quality of Grants Sewage Treatment Discharge is a strict implementation of water quality sampling along the Rio San Jose. A strict sampling program has begun as a result of a consent decree signed by the Acoma and Laguna Pueblos, City of Grants, and New Mexico Water Quality Control Commission (WQCC).

BIA has continued its trust responsibility by sending a letter to the WQCC commenting on their planned sample collection protocol and reminding the WQCC of the tribes sovereignty (attachment 3).

The issue of control of surface water quality is addressed in specific, Federal and State regulations which are listed here.

1. Federal Laws, Policies and Regulations:
  - A. Federal Water Pollution and Control Act or "The Clean Water Act"
    1. Title I: Research and Related Programs
      - a. Section 101(a): Restore and maintain the chemical/physical and biological integrity of the nation's waters.

2. Title II: Grants for Construction of Treatment Works
  - a. Section 205 allotment of Grant funds (also under 33 USC 1285)
  - b. Section 208 (33 USC 1288) Area wide waste treatment management.
3. Title III: Standards and Enforcement
  - a. Various sections deal with water quality standards, their implementation and effluent limitations (see Sections 301a, 302, 306, 307, 308, 314, 316, and 318).
4. Title IV: Permits and Licenses
  - a. Sections 402 and 404:  
NPDES permits and permits for dredged or fill material.  
The discharge of any pollutant by any person shall be unlawful.
5. Title V: General provisions and definitions
  - a. Sections 510 and 511 explains state authority and the authority of other political subdivisions (including Indian tribes).

B. Code of Federal Regulations:

Title 40: Protection of Environment-Environmental Protection Agency

1. Part 35.1521: Water Quality Management Planning
  - a. Includes descriptions of work programs, grant funds.
  - b. Section 1521-6 - Planning on Indian lands:  
EPA/state/Indian Tribe roles in water quality management planning on Indian Lands (Appendix B).
2. Part 124 deals with RCRA and NPDES permits for protecting the Nation's Waters.
3. Part 131 contains information on the development, review, revision, and approval of water quality standards.
  - A. 131.20 - State/Federal Roles in implementing standards, November 8, 1983, Federal Register; explains also interstate/international treaty issues.
4. Part 141: Establishment of Primary Drinking Water Regulations
  - A. Subpart B sets maximum contaminant levels for drinking water.
5. Part 143 - National Secondary Drinking Water Regulations

C. Title XIV

Safe Drinking Water Act or Safety of Public Water Systems Act

- A. Section 1412: National Drinking Water Regulations
- B. Section 1413: State Primary Enforcement Responsibility
- C. This entire Act addresses areas for State and Federal supervision.

D. EPA Policy Statement of November 8, 1984

"EPA policy for the administration of Environmental Programs on Indian lands". (See attached statement, Appendix C).

2. New Mexico Policies, Laws, Regulations

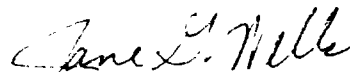
- A. New Mexico's policies and laws are consistent with the Federal laws enumerated above including Section 101, 106, 201, 205, 303, 305, and 401 of the Clean Water Act. Appendix D is the Fiscal Year 1986 work plan of the Surveillance and Standards Section of the New Mexico EID.
  - 1. New Mexico's Water Quality Standards published in WQCC 85-1, Water Quality Standards for Interstate and Intrastate streams in New Mexico (Appendix A) are adopted by the Water Quality Control Commission under authority of the New Mexico Water Quality Act (NMSA 1978).
  - 2. New Mexico Water Quality Control Commission regulations (as amended through November 15, 1984). Part 1 is attached (Appendix E).
  - 3. Federal Grant funds are given annually to New Mexico Environmental Improvement Division under Title II Section 205 (j) and 208b of the Clean Water Act (or 33 USC #1285J and 1288) for water quality management planning in compliance with Section 106 of the Clean Water Act (CWA). USC number 33 1285j(3) discusses the State's funding program with local regional or interstate entities (Appendix F).
  - 4. State Triennial Review
    - a. Clean Water Act, Section 303(c) (1)  
The state must hold public hearings to review applicable water quality standards at least once every three years. The hearings will include review, modification, and adoption of standards. Results of the reviews are made available to the EPA administrator. EPA determines whether the standards are consistent with EPA requirements outlined by the Clean Water Act.

As part of this initial assignment I was asked to locate and study perennial stream segments on Indian lands in New Mexico only. If a tribal stream assessment program is begun we may wish to involve other tribes outside of New Mexico but within our jurisdiction.

Implementation of a water quality management program will take a considerable amount of effort and planning. Agencies and groups which probably will need to be contacted some time during this program include: 1) each individual Pueblo, 2) the All Indian Pueblo Council, 3) New Mexico Office of Indian Affairs-Director 4) New Mexico Soil and Water Conservation

Division Director, Jose H. Lucero, 5) New Mexico Environmental Improvement Division Director, Denise Fort, 6) New Mexico Water Quality Control Commission, 7) U.S. Environmental Protection Agency, Dick Whittington, Region VI Administrator, 8) Interior Solicitor's Office, Sandy Etheridge, Attorney, and 8) United States Attorneys Office, Herb Becker, Attorney.

Suggestions for beginning such Water Quality Management Programs on trust lands are briefly discussed in a letter to the Environmental Improvement Division, dated April 4, 1986 (Attachment 3). The BIA letter to EPA dated March 25, 1986 (Attachment 1) discusses a technical implementation of a water quality management plan (relative to a NPDES permit) for protecting Acoma Pueblo's Stream Standards. Another letter (Attachment 2) requests that EID consider changing the existing stream standards on the Rio San Jose even though they include the uses of irrigation and PCR. The procedures which Acoma Pueblo and its attorneys and experts have had to follow for protection of the Rio San Jose water quality may be more detailed than may be required on other trust lands. However, meeting and educating each tribe regarding an acceptable water quality management plan or policy and each tribe's communication to BIA of their needs is a complex first step. The reward from the implementation of each management plan will be the attainment of clean water of quality that approximates what a tribe "used to have" for needs they have always had.

  
Hydrologist

*Attachment 1*



United States Department of the Interior  
BUREAU OF INDIAN AFFAIRS  
ALBUQUERQUE AREA OFFICE  
P. O. BOX 8327  
ALBUQUERQUE, NEW MEXICO 87198-8327

IN REPLY REFER TO:  
340-Rights Protection.

MAR 25 1986

Mark Chandler, Attorney  
Office of Regional Council  
U.S. Environmental Protection Agency  
Interfirst Two Bldg. - 120 Elm Street  
Dallas, Texas 75270

Dear Mr. Chandler:

The Bureau of Indian Affairs (BIA), acting on its Federal trust responsibility for the Pueblos of Acoma and Laguna, is participating in the March 25, 1986, Public Hearing regarding NPDES permit number NM0020737. Since 1979 the BIA has participated in State hearings about Sections 1-102 and 2-107 of the New Mexico Water Quality Standards. The BIA protested against making changes to the original standards. The original standards for Section 2-107 (Rio San Jose near Acoma Pueblo) described high quality fishable and swimmable waters, waters which were a source of important religious ceremonies and a vital irrigation supply. The stream standards have been downgraded to include a use of coldwater fishery. The stream standards for the Rio San Jose Section 2-107 provide the water quality criteria needed for inclusion in NPDES permit NM0020737. Requests from the BIA to Environmental Protection Agency (EPA) were made to change existing standards of coldwater fishery to high quality coldwater fishery but the requests were not fulfilled.

The BIA has funded a study for Acoma Pueblo (Contract No. M00C14204041), entitled Intensive Water Quality Study of the Rio San Jose. This contract funds experts who have provided water quality data and an evaluation of the Grants Sewage Treatment Plant (STP) for purposes of evaluating NPDES permit NM0020737. In addition to funding Contract No. M00C14204041, a cooperative agreement was begun in May of 1985 between the BIA and Acoma Pueblo to provide for collection of water quality samples at 3 stations along the Rio San Jose between the STP and Acomita Lake. The BIA laboratory in Gallup, New Mexico, provides the analytical support for determination of the water quality of the submitted samples.

Enclosures 1 and 2 include all data from the water quality sampling program including graphic presentations of two permitted parameters, fecal coliform and Total Suspended Solids. Note that lines connecting single sample dates do not imply a gradual increase or decrease in concentration of a particular water quality constituent; only the points of inflection along the lines represent determined concentrations. Also enclosed (Enclosures 3A, 3B, 3C) and listed here are documents which demonstrate the BIA's support of the Acoma and Laguna Pueblos regarding NPDES permit NM0020737.

Attachment 1

CONFIDENTIAL

POL-EPA01-0009800

3A. BIA Support in Protecting Stream Standards:

December 3, 1981	BIA Statement for the record of the New Mexico Water Quality Control Commission. Hearing on December 3, 1981, 3 pages included here.
May 20, 1982	Memo from the New Mexico Water Quality Control Commission to persons heard at the December 3 and 4, 1981, Public Hearing.
August 2, 1983	Request from Acoma Pueblo to BIA for affidavit for use in Case CIV-82-1540.
August 4, 1983	Letter from EPA attorney Mark Chandler, stating EPA position regarding stream standards for segment 2-107, Rio San Jose.
September 2, 1983	Letter from BIA Albuquerque Area Office transmitting BIA affidavit to Deputy Assistant Secretary, Indian Affairs.
March 14, 1986	Letter from BIA Albuquerque Area Office, RE: proposed changes to the general New Mexico Water Quality Standards and specific standards for segment 2-107, Rio San Jose.

3B. BIA Contract Support with Acoma Pueblo:

August 22, 1983	Original Contract No. M00C14204041, for conducting a Water Quality Study of the Rio San Jose near the Pueblo of Acoma.
September 30, 1983	Modification No. I to Contract No. M00C14204041.
August 1, 1985	Modification No. II to Contract No. M00C14204041.
September 6, 1985	BIA letter to Pueblo of Acoma, RE: Modification No. II, Contract No. M00C14204041.

3C. Cooperative Water Quality Sampling Program. Cooperators include Pueblo of Acoma, BIA Southern Pueblos Agency, BIA Branch of Rights Protection, and BIA Natural Resources and Engineering Laboratory.

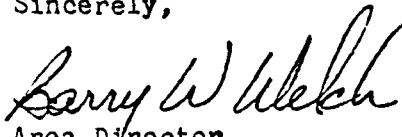
June 28, 1985	BIA letters to Governor Garcia of Acoma Pueblo
July 18, 1985	to describe and initiate water quality sampling
August 8, 1985	program.



The BIA provides this information as part of its trust responsibility to Acoma and Laguna Pueblos. The BIA is hopeful that this information will help to produce a useful NPDES permit which controls the quality of waste effluent from the Grants STP and protects the economic, religious, and cultural uses of the Rio San Jose waters by members of the Pueblos of Acoma and Laguna.

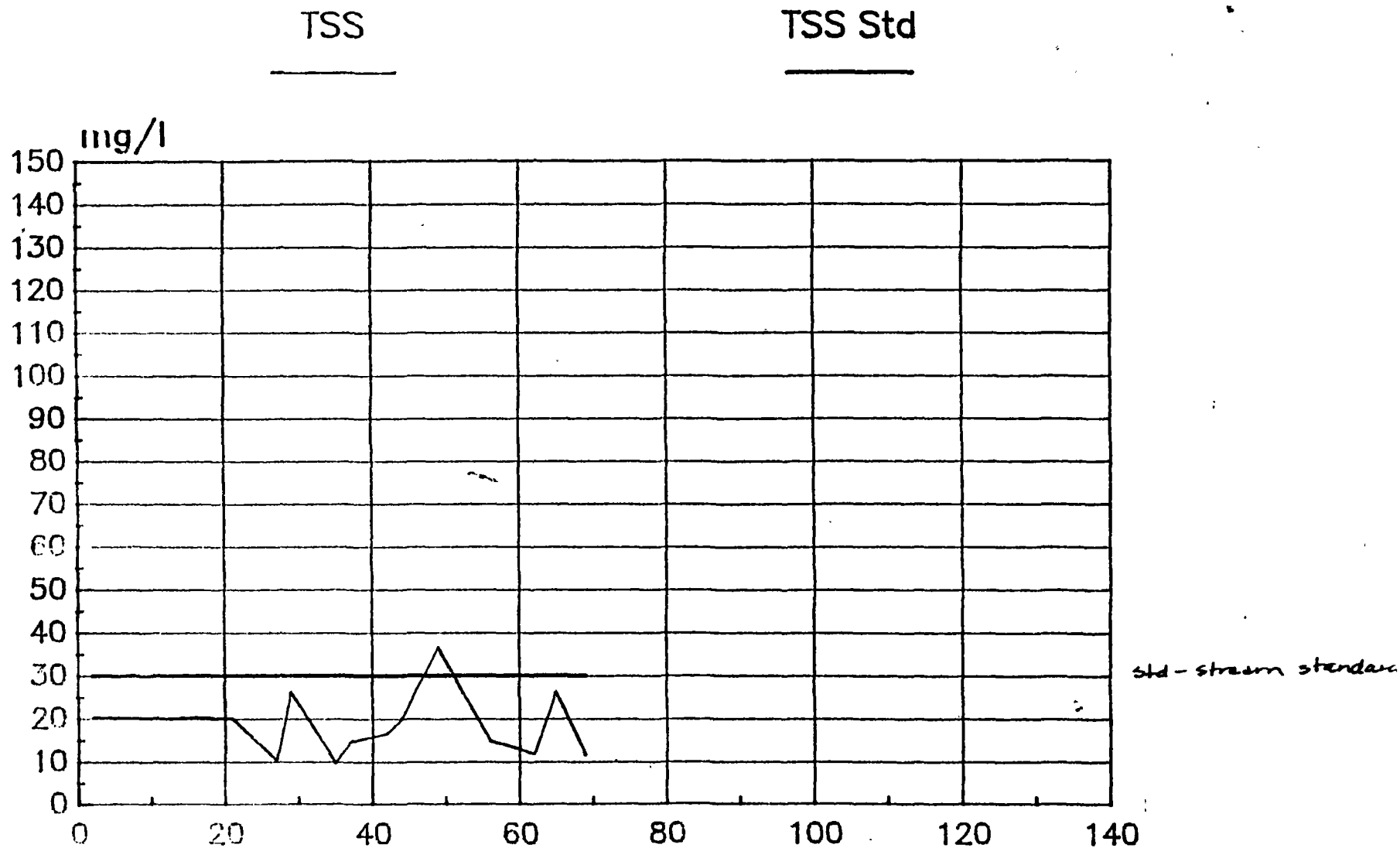
Sincerely,

Acting

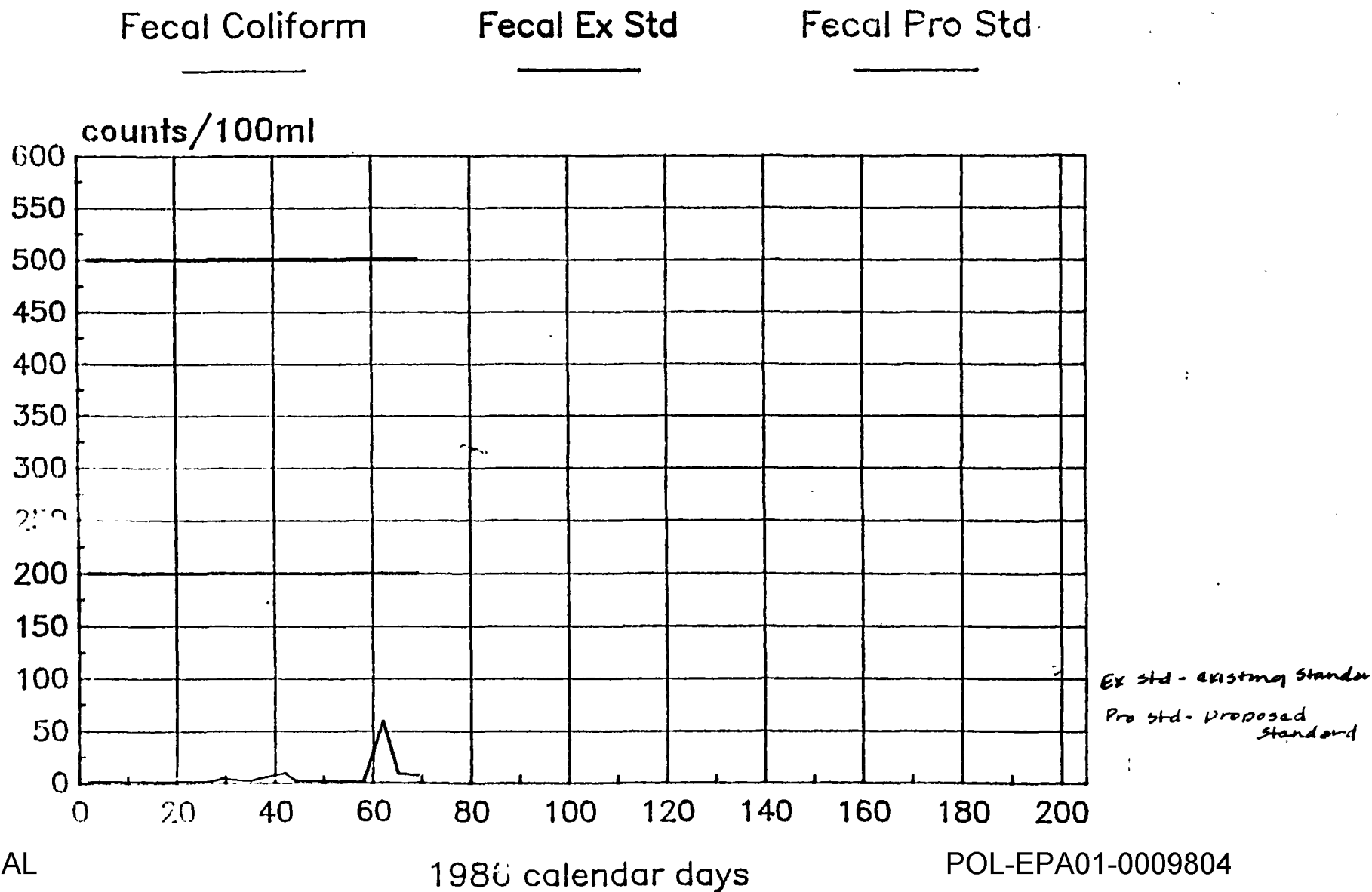
  
Area Director

Enclosures

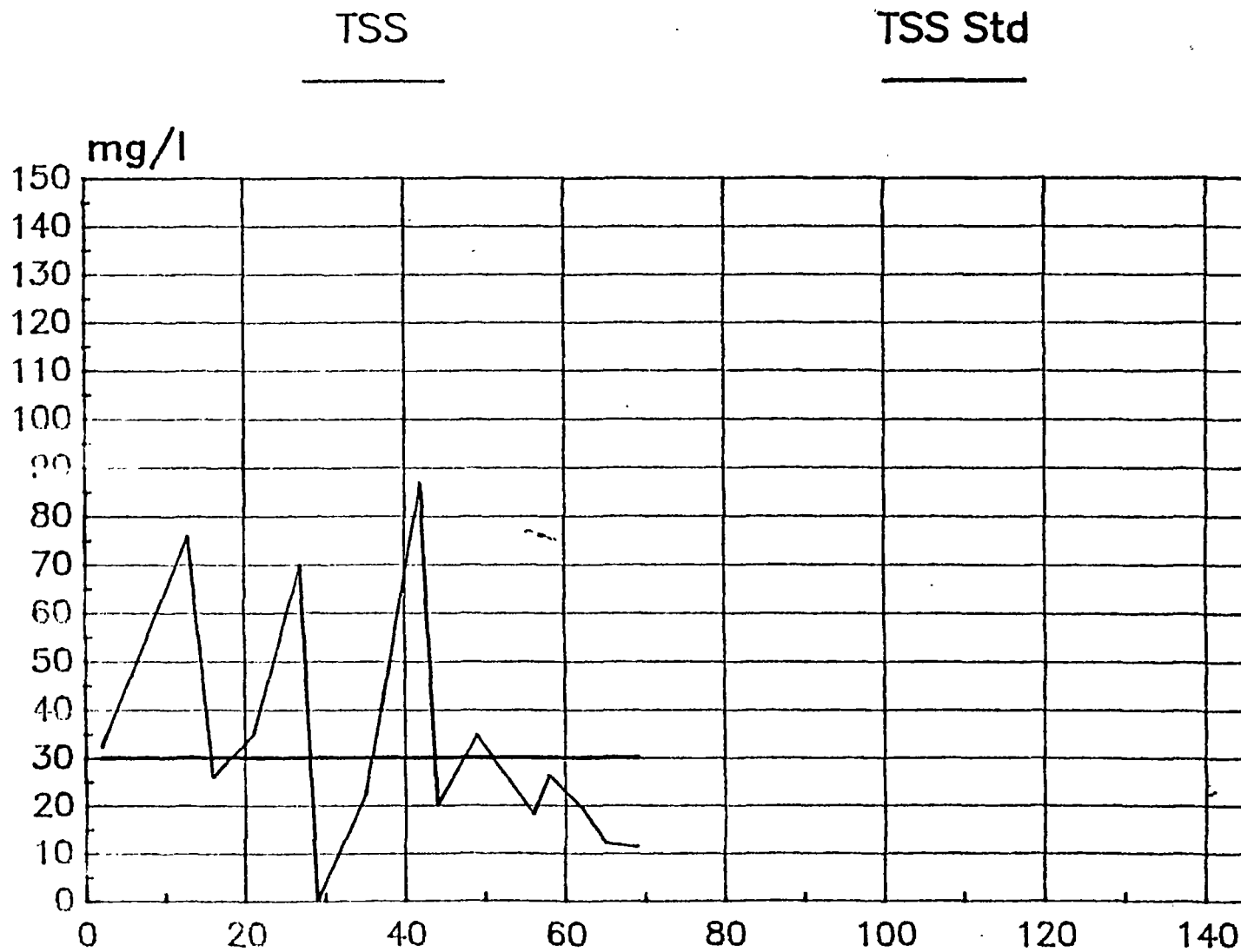
# STP at Rio San Jose



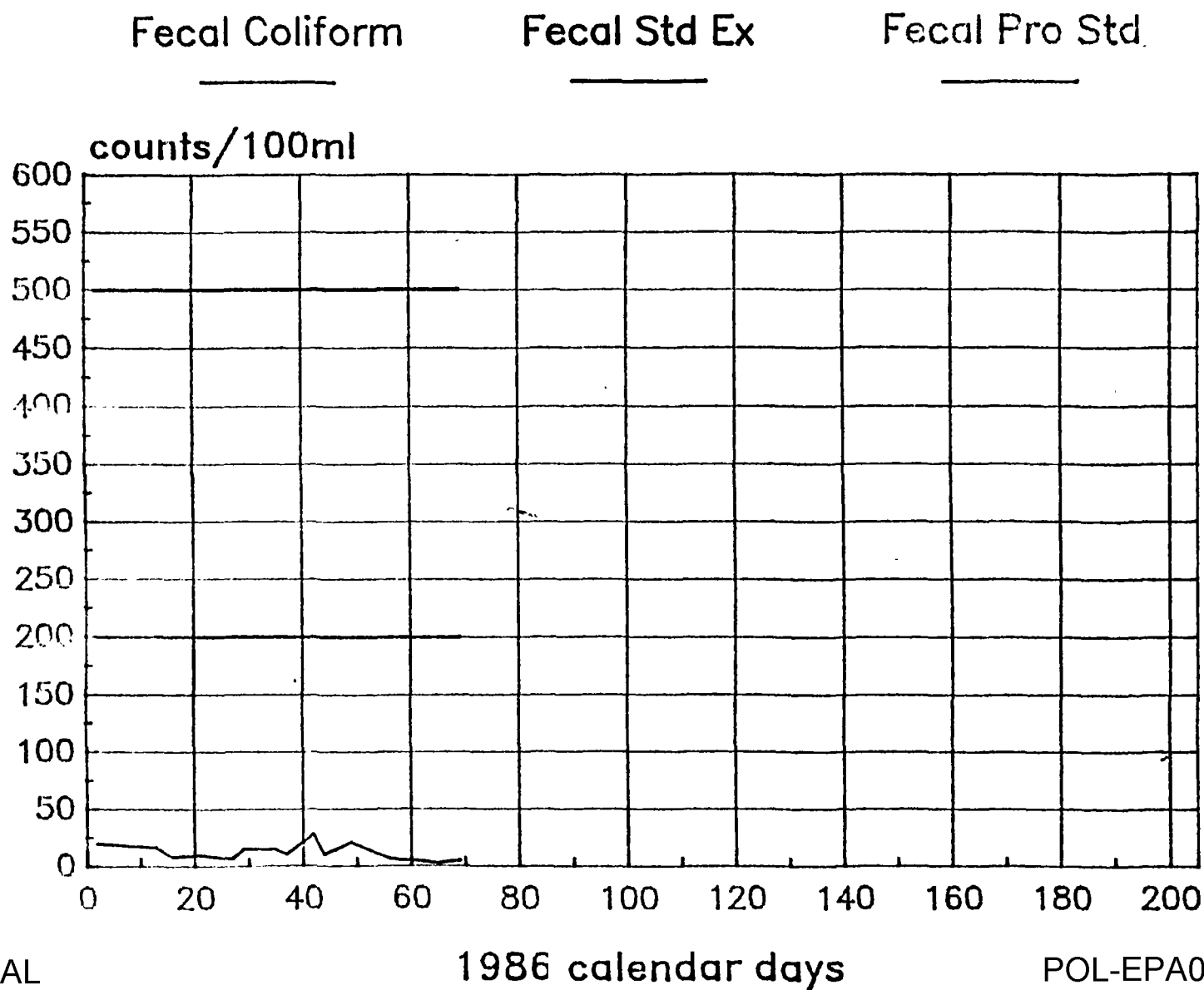
# STP at Rio San Jose



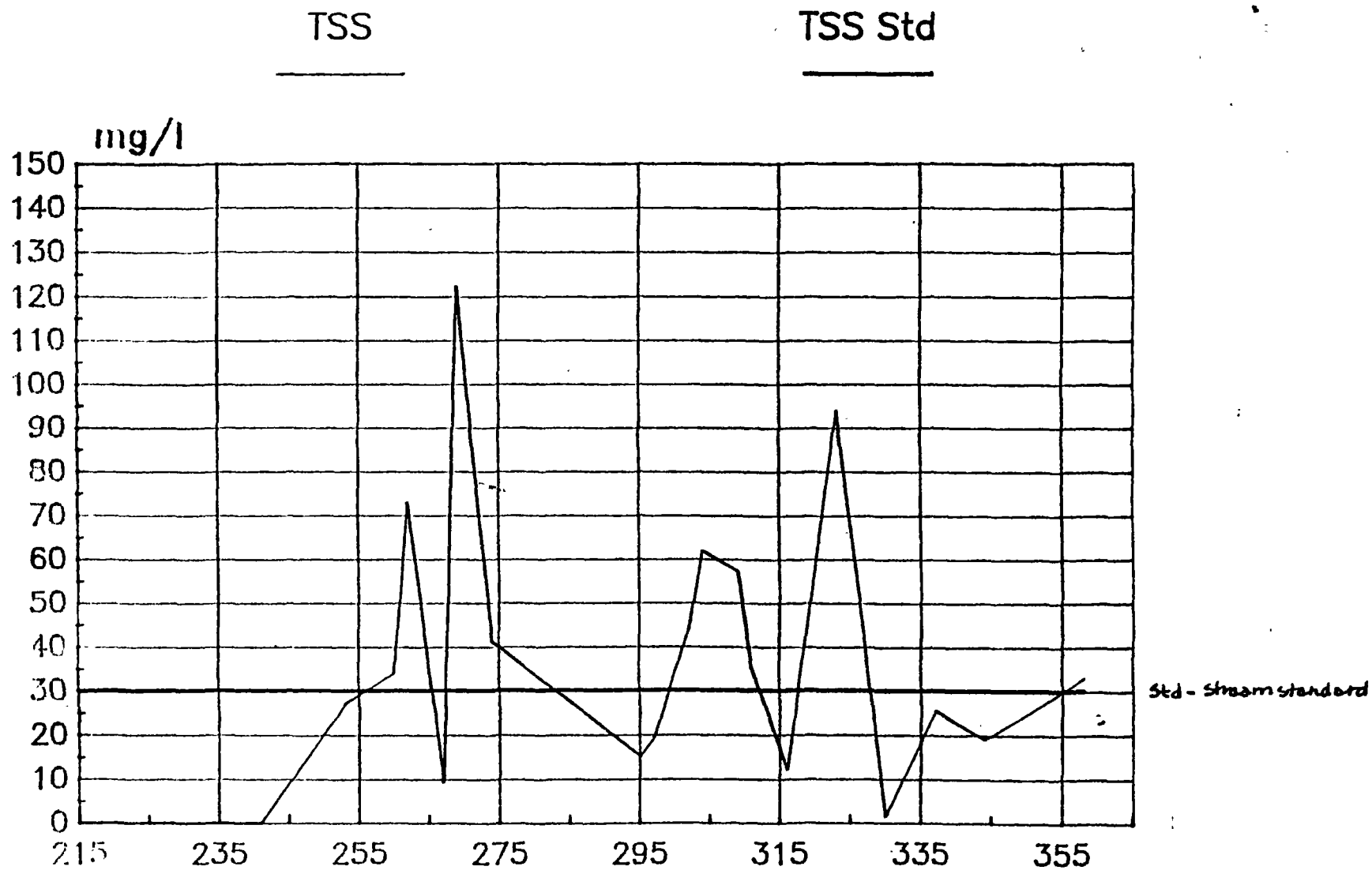
# Acoma Diversion Near Horace Springs



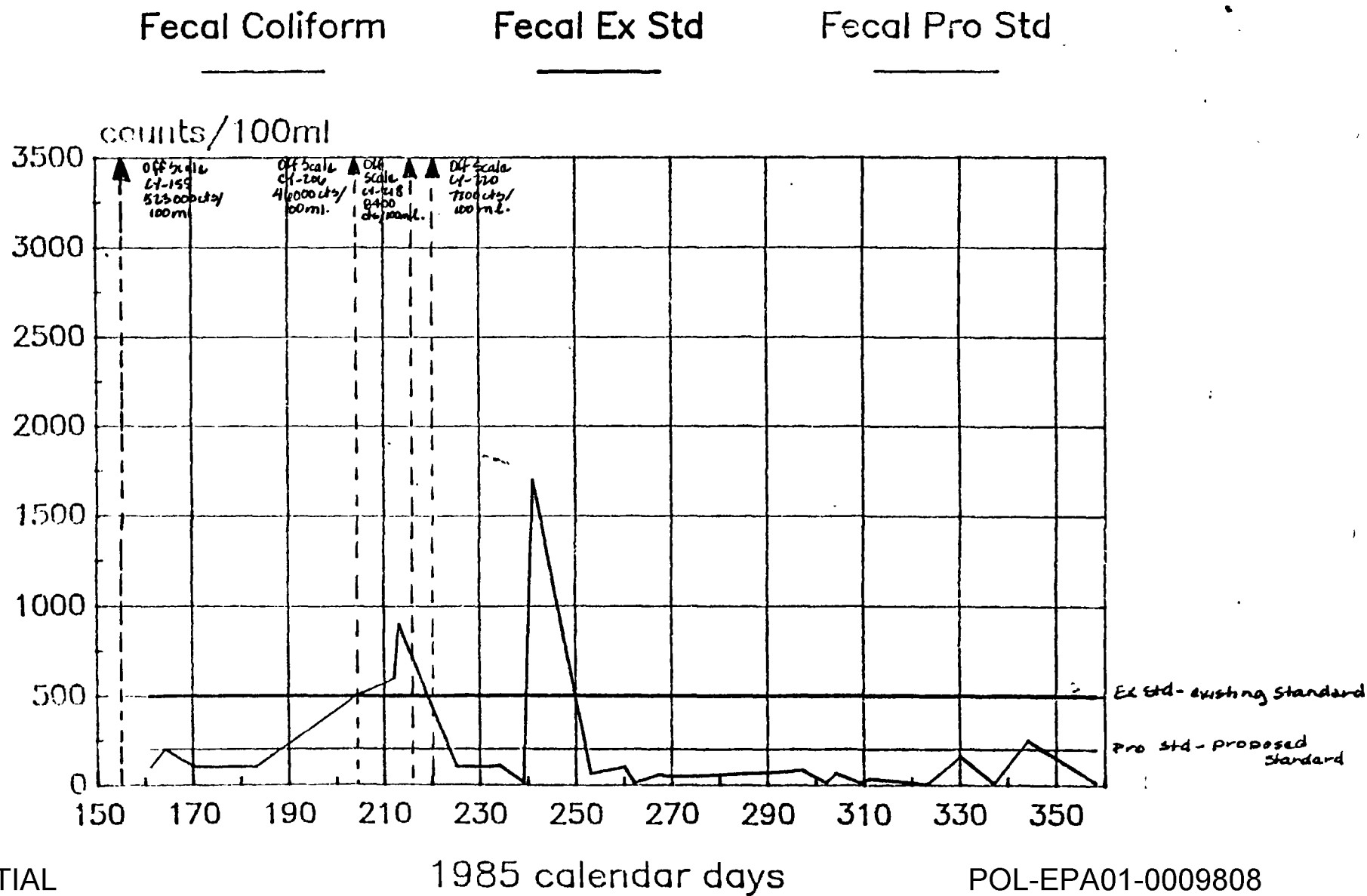
# Acoma Diversion Near Horace Springs



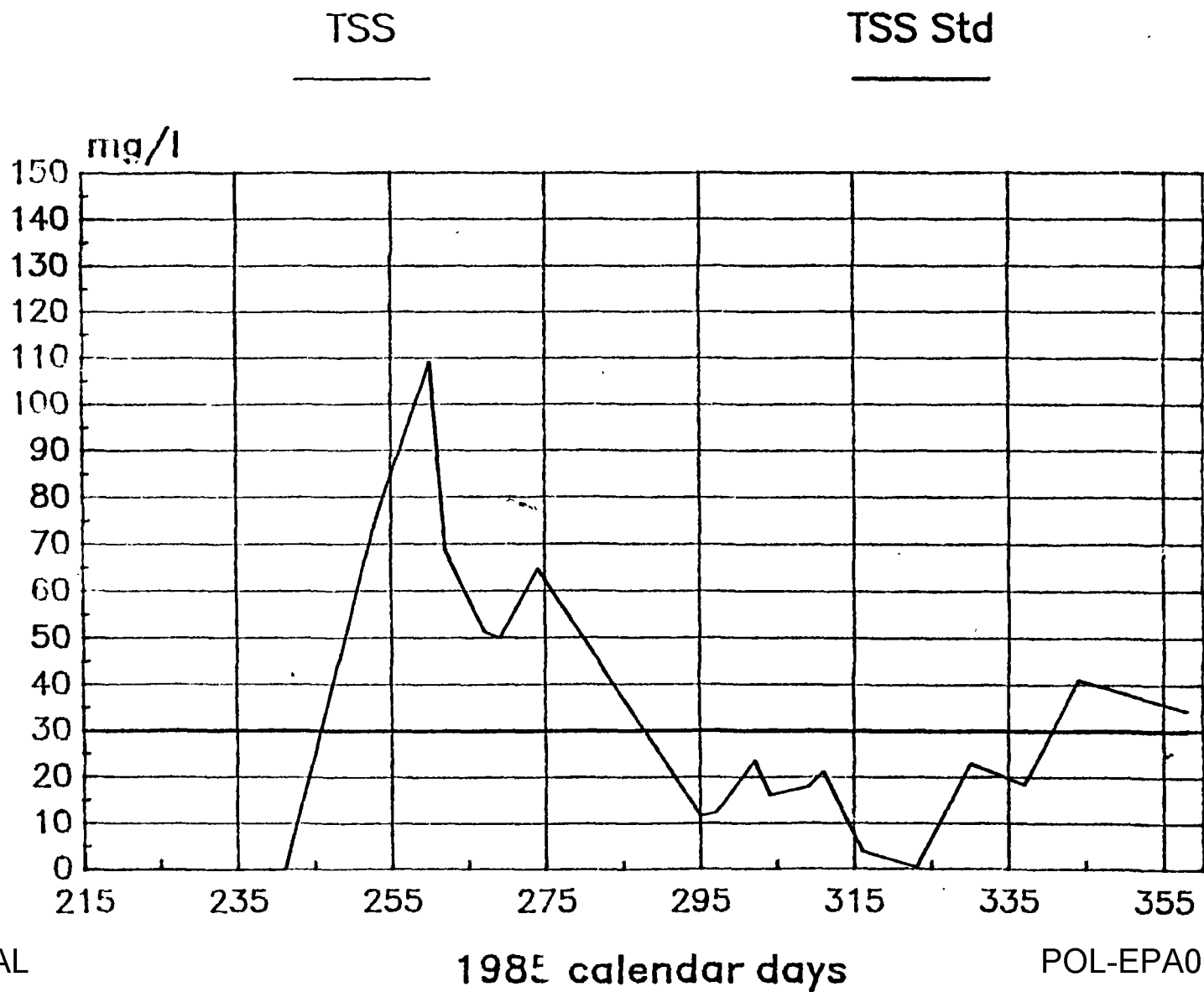
# STP at Rio San Jose



# STP at Rio San Jose

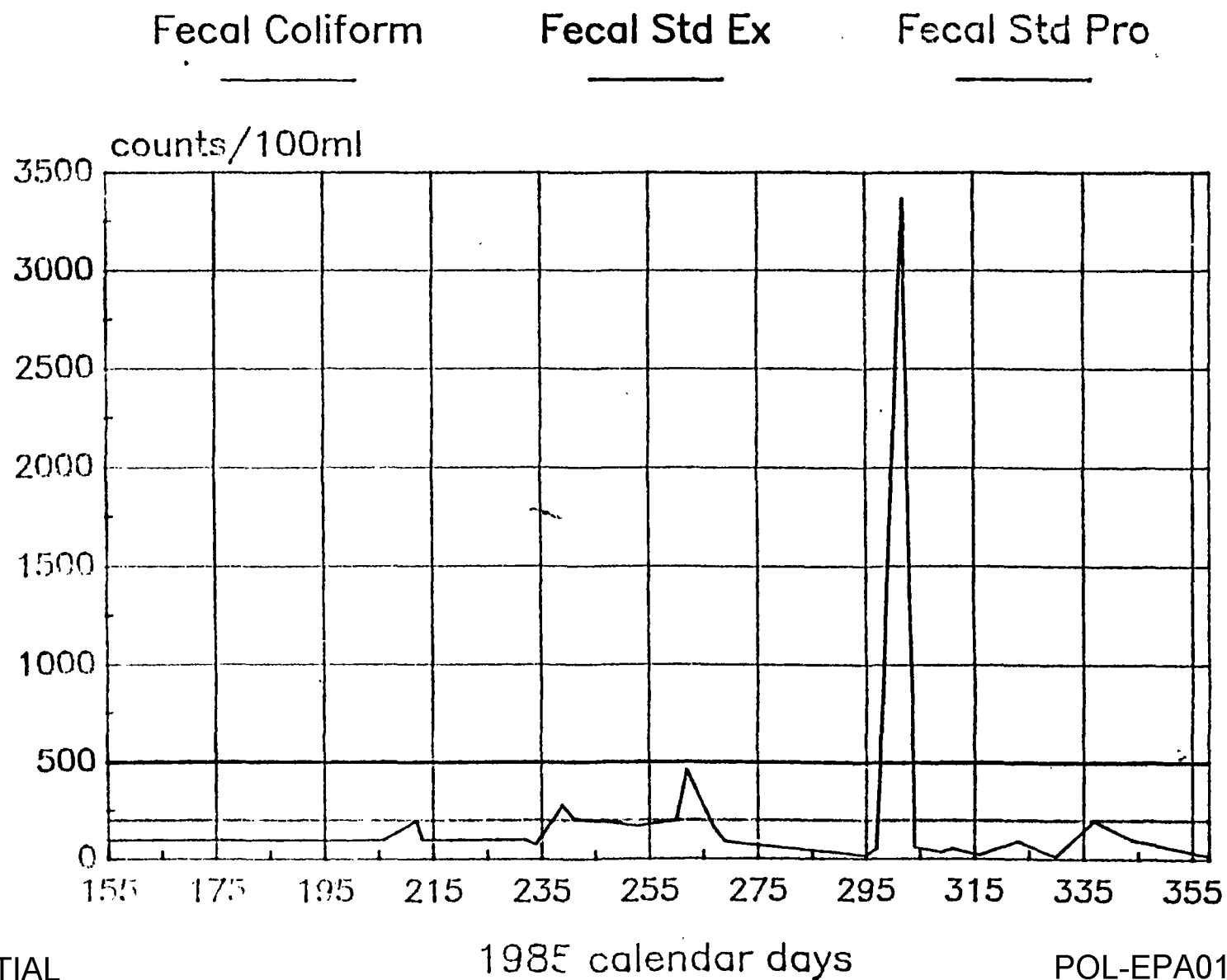


# Acoma Diversion Near Horace Springs

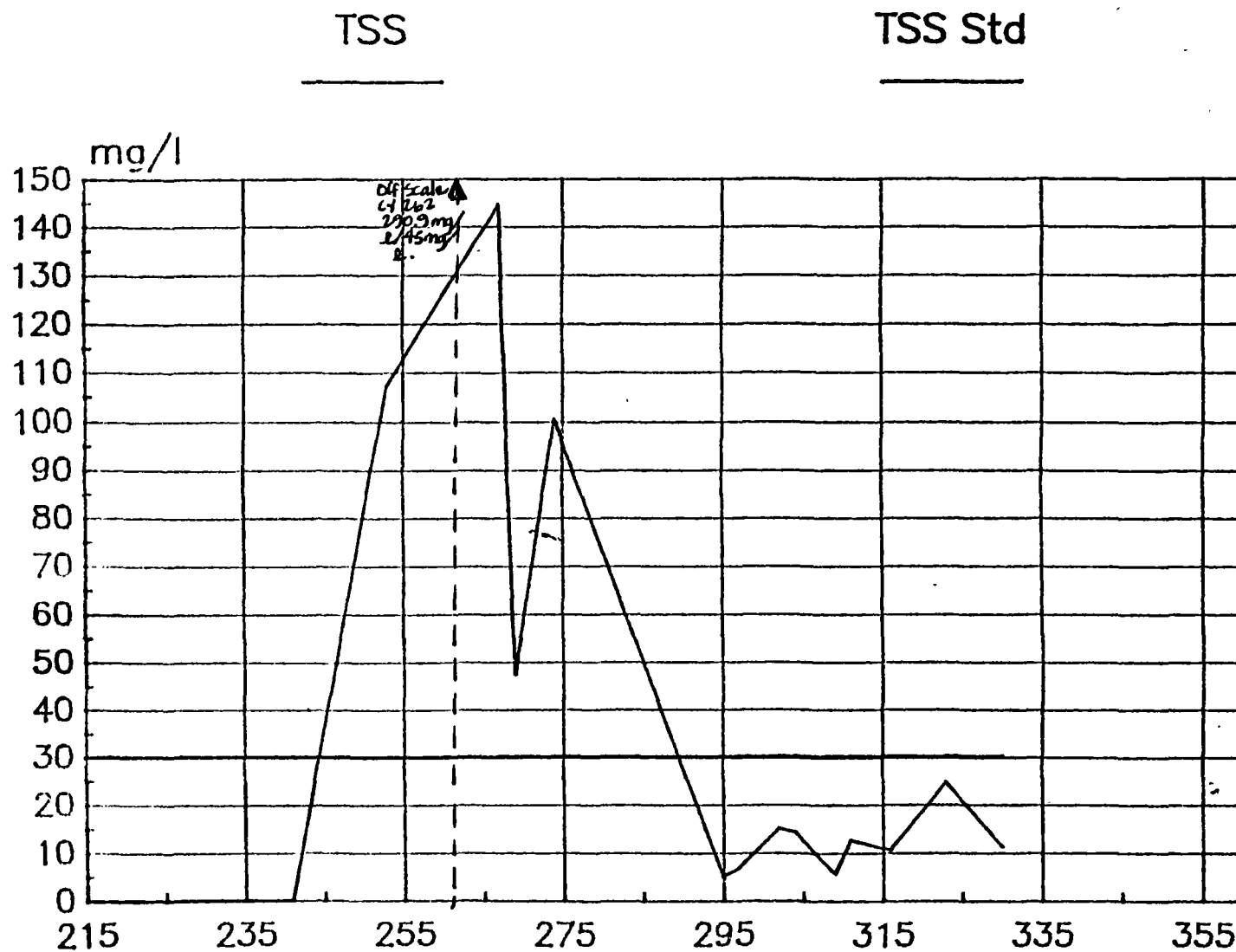




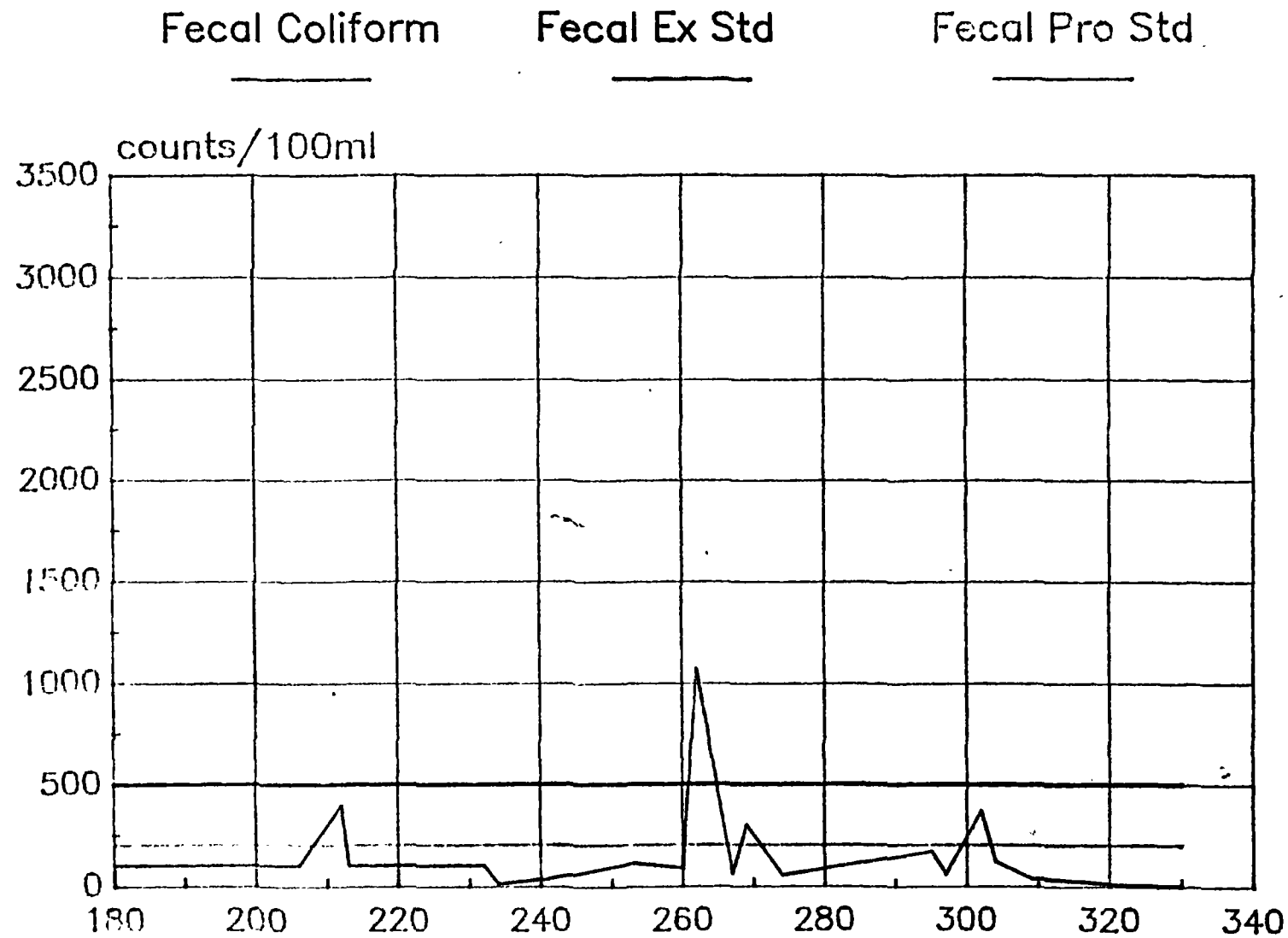
# Acoma Diversion near Horace Springs



# Inflow to Acomita Lake



# Inflow to Acomita Lake



Station	Units	11N.9W.31.443	10N.9W.23.444	10N.7W.29.413	11N.9W.31.443	10N.7W.23.444	10N.7W.29.413
Date		05/16/85	05/16/85	05/16/85	05/21/85	05/21/85	05/21/85
Specific Conductance	UMHOS	2050	1020	1030	2240	1490	1320
Sodium	MG/L	0.0435	271	98.9	103	251	152
Potassium	MG/L	0.02557	14.5	5.47	12.9	7.04	5.08
Boron	MG/L	0.48	0.13	< 0.05	0.67	0.74	0.6
Sulfates	MG/L	0.02082	466	226	232	459	315
Fluorides	MG/L	0.05264	0.59	0.48	0.47	0.58	0.68
Ph	----	7.43	7.85	8.32	7.37	7.93	8.58
Carbonates	MG/L	0.03333	0	0	30.3	0	31.7
Bicarbonates	MG/L	0.01639	432	252	177	426	291
Chlorides	MG/L	0.02821	241	80.3	78.4	252	131
Calcium	MG/L	0.0499	194	82.1	76.1	126	98.1
Magnesium	MG/L	0.08226	10.9	31.6	29.2	55.9	42.5
Sum Cations		22.736499	22.736499	11.1382239	10.8097776	22.134087	15.1832528
Sum Anions		23.58121	23.58121	11.100863	10.952833	23.64744	15.0233
% difference		-1.823732	-1.82373225757	0.16799655565	-0.65734484998	-3.30559747385	0.529530135594
Residue, Total	MG/L	1398	679	667	1401	968	872
Residue, Filter	MG/L	1392	667	653	1401	947	852
Hardness as CaCO3	MG/L	530	335	310			
Alkalinity as CaCO3	MG/L	354	206	170			
S.A.R.	----	5.17	2.35	2.56			
Mercury	UG/L				< 0.2		0.3
Arsenic	UG/L				3		4.1
Chromium	UG/L				< 1		1.3
Cadmium	UG/L				< 1		1
Lead	UG/L				1.6		1.6
Silver	UG/L				< 0.2		< 0.2
Selenium	UG/L				< 2		< 2
Barium	UG/L				300		235
Phosphorus Tot. Reac	MG/L	2.89	0.82	0.39			
Nitrogen, Nitrate	MG/L	0.15	0.61	0.06			
Nitrogen, Nitrite	MG/L	< 0.01	0.04	< 0.01			
Fecal Coliform	CTS/100ml						
TSS	MG/L						

11N.9W.31.443	10N.7W.23.444	10N.7W.29.413	11N.9W.31.443	10N.7W.23.444	10N.7W.29.413	11N.9W.31.443	10N.7W.23.444
05/29/85	05/29/85	05/29/85	05/31/85	05/31/85	05/31/85	06/04/85	06/04/85
2030	1330	1340	2020	1340	1250	2510	1590
264	163	156	216	138	103	193	143
14.9	8.21	7.43	11.3	6.26	7.04	10.6	6.26
0.6	0.6	0.67	1.09	0.65	0.51	1.17	133
462	444	338	444	351	338	394	335
0.5	0.74	0.8	0.54	0.76	0.81	0.51	0.71
7.38	8.09	8.49	7.42	7.83	8.7	7.6	8.14
0	18.7	30.3	25	13.5	55.7	0	26
438	239	223	298	266	167	453	224
242	132	122	242	133	119	211	121
126	96.1	94.1	124	94.1	94.1	118	92.1
55.9	41.3	42.5	55.9	46.2	40.1	66.8	41.3
22.750727	15.4931577	15.1676251	20.569587	14.6590702	12.6547288	20.04971	14.3736962
23.62448	17.508281	15.143649	21.78837	15.869445	14.987761	21.58006	14.92605
-1.88409509417	-6.106160032	0.079099611323	-2.8773413222	-3.96473523874	-8.44002192596	-3.67609525587	-1.88518288257
1382	957	955	1355	973	897	1314	940
1371	951	912	1351	969	887	1312	933

<	0.2	<	0.2	<	0.2	<	0.2		0.22		0.22		0.22		0.22
<	1		4.6		4.4	<	1		4.8		4.3	<	1	<	1
<	1		1.2		1.3	<	1		1.6		1		2		2.1
<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1
<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2
<	2	<	2	<	2	<	2	<	2	<	2	<	2	<	2.1
	450		340		350		430		310		315		435		325
	0.91		2.04		0.56		2.89		0.78		0.52		3.18		1.83
<	0.01		1.45		0.15		0.03		1.65		0.33		0.15		0.34
<	0.01		0.06		0.09	<	0.01		0.25		0.07	<	0.01	<	0.01

10N.7W.29.413 06/04/85	11N.9W.31.443 06/10/85	10N.7W.23.444 06/10/85	10N.7W.29.413 06/10/85	11N.9W.31.443 06/18/85	10N.7W.23.444 06/18/85	10N.7W.29.413 06/18/85	11N.9W.31.443 06/20/85
1390	1850	1420	1350	1490	1630	2400	1910
131	230	133	133	232	124	115	235
5.08	12.1	6.26	6.26	15.3	7.04	5.87	12.5
0.72	0.9	0.81	0.71	0.9	0.71	0.62	0.9
326	403	333	328	386	321	308	374
0.75	0.55	0.9	0.94	0.28	0.75	0.81	0.62
8.56	7.67	8.09	8.75	7.57	8.02	8.86	7.68
26	0	15.4	30.7	0	12	36.7	0
233	422	251	218	421	245	193	425
105	181	128	115	200	127	107	191
86.1	110	92.1	92.1	124	102	90.1	116
41.3	54.7	43.7	42.5	51	35.2	37.7	43.7
13.5221236	20.303019	14.1361202	14.0374082	20.866081	13.5593648	12.7497879	19.925287
14.43482	20.41305	15.171112	14.669361	20.57871	14.6814	13.817511	20.14054
-3.2646501458	-0.27023974245	-3.53152352613	-2.20140690719	0.693382673832	-3.97310486436	-4.0189373561	-0.5372483638
895	1221	962	915	1224	933	867	1185
876	1213	962	905	1217	624	861	1172

< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
< 1	< 1.4	< 3.7	< 4	< 1	< 3.1	< 3.5	< 1.7
< 2.7	< 1	< 1.2	< 1	< 1	< 1.2	< 1.1	< 1.1
< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1
< 1	< 1	< 1	< 1	< 1	< 1	< 4.9	< 2.3
< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
< 2	< 7	< 2	< 1.4	< 7	< 2	< 2.5	< 2
< 305	< 450	< 350	< 355	< 2.85	< 210	< 210	< 250
< 0.4	< 2.89	< 0.87	< 0.6	< 2.7	< 0.65	< 0.44	< 2.37
< 0.18	< 0.01	< 0.2	< 0.01	< 0.1	< 0.75	< 0.23	< 0.22
< 0.01	< 0.01	< 0.2	< 0.01	< 0.01	< 0.19	< 0.01	< 0.01

10N.7W.23.444	10N.7W.29.413			
06/20/85	06/20/85			
1340	1300			
20.7	71.3			
0.78	2.35			
0.53	0.71			
75.4	166			
0.81	0.84			
7.89	8.79			
0	31			
269	217			
107	95.3			
84.1	86.1			
40.1	36.5			
8.4156106	10.4605195	22.736499	22.736499	22.736499
8.997208	10.734393	23.58121	23.58121	23.58121
-3.34005317209	-1.29216622149	-0.01823732258	-0.018237	-0.018237
851	847			
844	841			

<	0.2	<	0.2
	4		3.4
	1.2	<	1
<	0.1	<	0.1
	6.8		1.2
<	0.2	<	0.2
<	2	<	2
	200		200
	0.69		0.47
	1.36		0.22
	0.15		0.02

Station	Units	Meq conv.	11N.9W.31.443	10N.7W.23.444	10N.7W.29.413	11N.9W.31.443	10N.7W.23.444	10N.7W.29.413
Date			03/25/85	06/25/85	06/25/85	07/03/85	07/03/85	07/03/85
Specific Conductance	UMHOS		1640	1200	1160	1820	1280	1210
Sodium	MG/L	0.0435	202	138	136	214	136	131
Potassium	MG/L	0.02557	11.7	0.49	5.08	11	5.87	5.08
Boron	MG/L		0.57	0.49	0.33	0.49	0.73	0.49
Sulfates	MG/L	0.02082	330	287	282	332	290	284
Fluorides	MG/L	0.05264	0.56	0.83	0.83	0.53	0.77	0.83
Ph	----		7.59	7.74	8.76	7.59	8.26	8.9
Carbonates	MG/L	0.03333	0	0	35.7	0	15.4	33
Bicarbonates	MG/L	0.01639	381	258	193	374	229	195
Chlorides	MG/L	0.02821	195	105	100	205	101	93.1
Calcium	MG/L	0.0499	100	86.1	86.1	106	86.1	82.1
Magnesium	MG/L	0.08226	49.8	38.9	36.5	45	35.2	35.2
Sum Cations		0.0118028	18.172717	13.5118333	13.3447756	18.58137	13.2580379	12.8207376
Sum Anions		0.0026088	18.61614	13.19422	13.045391	18.82515	13.153602	12.835171
% difference		<del>63.795841</del>	-1.20531877356	1.189293290297	1.134455134512	-0.65170456915	0.395416189208	-0.05625760609
Residue, Total	MG/L		1135	867	828	1124	821	779
Residue, Filter	MG/L		1133	867	828	1115	804	769
Hardness as CaCO3	MG/L							
Alkalinity as CaCO3	MG/L							
S.A.R.	----							
Mercury	UG/L		< 0.2	< 0.2	0.34	< 0.2	< 0.2	< 0.2
Arsenic	UG/L		2.3	4.8	5.4	< 1	2.9	< 1
Chromium	UG/L		< 1	< 1	< 1	< 1	< 1	< 1
Cadmium	UG/L		0.4	0.1	0.1	< 0.1	< 1	< 0.1
Lead	UG/L		< 1	< 1	12.5	< 1	< 1	< 1
Silver	UG/L		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Selenium	UG/L		< 2	< 2	< 2	< 2	< 2	< 2
Barium	UG/L		280	220	200	260	200	200
Phosphorus Tot. Reac	MG/L		1.65	0.54	0.38	0		0
Nitrogen, Nitrate	MG/L		1.88	1.5	0.1	0.44	0.65	0.02
Nitrogen, Nitrite	MG/L		< 0.71	0.09	< 0.01	0.01	< 0.01	< 0.01
Fecal Coliform	CTS/100ml							
TSS	MG/L							



11N.9W.31.443	10N.7W.23.444	10N.7W.29.413	11N.9W.31.443	10N.9W.23.444	10N.7W.29.413	11N.9W.31.443	10N.9W.23.444
07/23/85	07/23/85	07/23/85	07/25/85	07/25/85	07/25/85	07/31/85	07/31/85
1800	1050	1160	1190	1190	1170	1880	1190
202	126	122	200	124	122	220	126
11	6.26	5.47	12.5	6.65	5.87	12.5	9.78
0.87	0.53	0.53	0.87	0.44	0.36	0.96	0.52
353	273	272	347	276	265	393	250
0.55	0.82	0.81	0.55	0.87	0.96	0.51	0.56
7.53	7.93	8.41	7.54	7.86	8.62	7.39	7.41
0	0	17.2	0	0	31.6	0	0
330	259	234	313	273	211	303	233
205	94.6	85.9	248	97.7	86.9	184	103
122	82.1	80.1	112	82.1	78.1	116	78.1
41.3	31.6	34	46.2	36.5	35.2	47.4	23.1
18.553408	12.3372742	12.2406979	18.408837	12.6633205	12.2498379	19.577149	11.5284706
18.54121	12.597536	12.494815	19.35069	12.976907	12.563547	18.33907	11.9295
0.032883476519	-1.04376892349	-1.02733709637	-2.49434533436	-1.22302541972	-1.26427370254	3.265301848795	-1.70956561775
1156	875	841	1168	870	808	1217	788
1151	813	807	1160	821	776	1211	735

<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2
	2.2		3.3		4.3		5.4		4		2.9		6.8
<	1	<	1	<	1	<	1	<	1	<	1	<	1.2
<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1
	9.9		26		2.1		8.3		9		1		1
<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2
<	2	<	2	<	2	<	2	<	2	<	4	<	2
	360		250		250		390		270		400		275
	0.38		0.57		0.45		29		63.6		41		0.73
	6.6		0.7		0.08		6.6		0.56		0.15		0.3
	6.12		0.02		0.02		1.9		0.01	<	0.01	<	0.01

10N.7W.29.413	11N.9W.31.443	10N.9W.23.444	10N.7W.29.413	11N.9W.31.443	10N.9W.23.444	10N.7W.29.413	11N.9W.31.443
07/31/85	08/06/85	08/06/85	08/06/85	08/29/85	08/29/85	08/29/85	09/24/85
1160	2270	1500	1410	1280	1870	1260	1810
122	214	629	126	136	209	138	235
7.82	12.5	7.04	7.82	7.82	13.7	5.47	14.9
0.43	1.05	0.78	0.6	0.41	0.92	0.33	0.33
253	412	267	248	293	360	289	430
0.61	0.52	0.72	0.64	0.7	0.55	0.74	0.57
8.3	7.75	7.75	9.02	7.87	7.3	8.38	7.45
14.2	0	0	45.2	0	0	17	0
201	333	267	185	283	315	241	323
94.3	187	101	104	104	181	98.5	226
80.1	112	88.1	84.1	90.1	116	84.1	118
28	57.1	34	32.8	36.5	43.7	37.7	58.3
11.8072274	19.914471	34.7345428	12.5756754	13.6144374	18.824971	13.4406599	21.287451
11.695339	19.31098	12.78428	12.635866	13.67247	17.76406	13.312265	20.62203
0.476068860293	1.53851895801	46.19277479239	-0.23874224525	-0.21267562186	2.899532922859	0.479928458215	1.587757672303
815	1296	855	779	819	1130	693	1399
727	1271	801	759	823	1128	689	1392

<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	2.5		
<	5.4	<	3	<	6	<	8.4	<	4.6	<	1	<	4.1	<	2.5
<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
<	0.2	<	0.1	<	0.1	<	0.3	<	0.1	<	0.1	<	0.1	<	0.1
<	3.9	<	1	<	1	<	14.6	<	1	<	1	<	6	<	2.5
<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2	<	0.2
<	2	<	2	<	2	<	2	<	2	<	2	<	2	<	8.1
<	300	<	460	<	300	<	375	<	250	<	310	<	250	<	400
<	0.9	<	2.23	<	0.71	<	0.57	<	0.55	<	2.44	<	0.22	<	0.24
<	0.67	<	11.5	<	0.8	<	0.08	<	1.63	<	9	<	0.03	<	20.8
<	0.05	<	0.2	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01

10N.9W.23.444	10N.7W.29.413	11N.9W.443	10N.9W.29.444
09/24/85	09/24/85	10/29/85	10/29/85
1240	1180	2110	1180
136	113	244	145
7.43	6.26	15.6	11.7
0.73	0.65	1.31	0.89
29.2	280	465	277
0.71	0.74	0.53	0.54
7.68	7.96	7.17	7.53
0	41.2	0	0
269	175	343	215
103	98.1	215	103
80.1	78.1	126	68.1
42.5	38.9	52.3	28
13.5990251	12.1726722	12.1726722	12.1726722
7.922484	12.838447	19.31098	19.31098
26.37612945089	-2.66191526527	63.79584070876	63.79584070876
912	1001	1323	825
861	856	1323	744

<	0.2		1	<	0.2	<	0.2
	3.8		4		2.5		4.2
<	1	<	1	<	1	<	1
<	0.1	<	0.1	<	0.1	<	0.1
<	1	<	1	<	1	<	1.5
	1	<	0.2	<	0.2	<	0.2
	3.6		2.4	<	2	<	2
	265		245		265		160
	0.64		0.38		1.77		0.75
	1.05		0.9		7.2		0.38
<	0.01	<	0.01		0.93	<	0.01

Station	Units	Meq conv.	11N.9W.31.443	10N.9W.23.444
Date			11/14/85	11/14/85
Specific Conductance	UMHOS		2250	1510
Sodium	MG/L	0.0435	246	156
Potassium	MG/L	0.02557	1.22	7.04
Boron	MG/L		1.22	0.89
Sulfates	MG/L	0.02082	464	335
Fluorides	MG/L	0.05264	0.61	0.74
Ph	----		7.28	7.53
Carbonates	MG/L	0.03333	0	0
Bicarbonates	MG/L	0.01639	343	298
Chlorides	MG/L	0.02821	236	123
Calcium	MG/L	0.0499	134	92.1
Magnesium	MG/L	0.08226	58.3	45
Sum Cations		0.0118028	22.2145534	15.2635028
Sum Anions		0.0026088	21.93981	15.32875
% difference		<del>63.795841</del>	0.622233860584	-0.2132801413
Residue, Total	MG/L		1427	980
Residue, Filter	MG/L		1413	950
Hardness as CaCO3	MG/L			
Alkalinity as CaCO3	MG/L			
S.A.R.	----			
Mercury	UG/L	<	0.2	< 0.2
Arsenic	UG/L		3.6	6.5
Chromium	UG/L	<	1	< 1
Cadmium	UG/L	<	0.1	< 0.1
Lead	UG/L	<	1	< 1
Silver	UG/L	<	0.2	< 0.2
Selenium	UG/L	<	2	< 2
Barium	UG/L		330	245
Phosphorus Tot. Reac	MG/L		2.41	0.98
Nitrogen, Nitrate	MG/L		0.8	1.2
Nitrogen, Nitrite	MG/L		0.24	0.03
Fecal Coliform	CTS/100ml			
TSS	MG/L			

Station	Units	Meq conv.	11N.9W.31.443	10N.9W.23.444	10N.7W.29.413	11N.9W.31.443	10N.9W.23.444
Date			01/28/86	01/28/86	01/28/86	02/20/86	02/20/86
Specific Conductance	UMHOS		2130	1350		2240	1540
Sodium	MG/L	0.0455	260	152		264	184
Potassium	MG/L	0.02557	13.3	6.65		13.3	7.82
Boron	MG/L		0.79	0.36		1.29	0.97
Sulfates	MG/L	0.02082	494	326		516	366
Fluorides	MG/L	0.05264	0.67	0.78		0.81	0.8
Ph	----		7.28	7.74		7.41	7.62
Carbonates	MG/L	0.03333	0	0		0	0
Bicarbonates	MG/L	0.01639	408	2.98		415	298
Chlorides	MG/L	0.02821	224	113		233	139
Calcium	MG/L	0.0499	126	88.1		154	92.1
Magnesium	MG/L	0.08226	59.5	42.5		46.2	47.4
Sum Cations		0.0118028	22.831951	14.6742805	0.0118027925	23.309093	16.6988/14
Sum Anions		0.0026083	23.29124	10.0238922	0.0026087975	24.1179	16.42553
% difference		63.795841	-0.995787564	18.828875952	63.795840709	-1.705372719	0.825196497
Residue, Total	MG/L		1407	957		1457	1031
Residue, Filter	MG/L		1386	903		1449	1007
Hardness as CaCO3	MG/L						
Alkalinity as CaCO3	MG/L						
S.A.R.	----						
Mercury	UG/L		< 0.2	< 0.2		< 0.2	< 0.2
Arsenic	UG/L		2.4	4.4		< 1	3.8
Chromium	UG/L		1.2	2.2		< 1	1.2
Cadmium	UG/L		0.5	< 0.1		0.2	0.2
Lead	UG/L		< 1	< 1		< 1	< 1
Silver	UG/L		< 0.2	< 0.2		< 0.2	0.4
Selenium	UG/L		13.3	5.6		< 2	< 2
Barium	UG/L		340	240		445	350
Phosphorus Tot. Reac	MG/L		1.27	0.89		1.67	1.06
Nitrogen, Nitrate	MG/L		4.8	1.06		0.26	0.6
Nitrogen, Nitrite	MG/L		1.9	0.04		0.13	0.03
Fecal Coliform	CTS/100ml						
TSS	MG/L						

*Attachment 2*

OFFICIAL FILE COPY		
Office	Surnames	Date
240	Murphy	3-12-86
300	Wetzel	3/13

340-Rights Protection

MAR 14 1986

New Mexico Water Quality  
Control Commission  
P.O. Box 968  
Santa Fe, New Mexico 87504-0968

RE: Proposed Changes of the Water Quality Standards of the Rio San Jose and  
Zero-Discharge Plans as Part of the Issues of the Case of the Pueblos of  
Acoma and Laguna vs. City of Grants, et. al., CV 1540-M-USDC NM

Gentlemen:

The Bureau of Indian Affairs (BIA), on behalf of the Pueblos of Acoma and Laguna, wishes to propose specific changes to the General Stream Standards (Section 1-102) for the Rio San Jose above Horace Springs, and changes to the specific standards for the Rio San Jose from the confluence with the Rio Puerco upstream to Horace Springs, (Section 2-107 $\frac{1}{2}$  described in document WQCC 85-1). These changes, along with the provisions of the NPDES Permit that will be issued by the Environmental Protection Agency, will seek to control and curtail pollution from the Grants Sewage Treatment Plant which has impaired the water quality and the Pueblos' use of the Rio San Jose. An alternate approach to protecting the Rio San Jose water quality consists of methods of diverting the sewage effluent away from the Rio San Jose.

Our view of the Stream Standards are fairly consistent with those of the experts employed by Acoma Pueblo, Walter G. Hines and Dr. W.J. Grenney, and our proposed changes are supported by their studies of the stream reach described in Sections 1-102 and 2-107. Recent studies conclude that numerical protection is needed of the designated uses: coldwater fishery, domestic water supply, fish culture, irrigation, livestock and wildlife watering, and primary contact recreation.

The General Standards for all surface water of New Mexico provide a basis for controlling discharge from the Grants Sewage Treatment Plant. These Standards, as enclosed here (Enclosure 1), lack the quantitative criteria but provide a qualitative and descriptive basis for the General Standards.

In addition to these General Standards and in concurrence with Walter G. Hines' studies, we propose the following standards:

M-1. The chlorine residual shall not be present in measurable amounts for more than one mile downstream from that zone where mixing of the wastewater discharge occurs.

Attachment 2

- N. **Inspection and reporting procedures:** An annual (low flow, summertime) inspection should be made of those stream reaches below waste discharges whose water quality data have shown a history of problems. Observation and comments should be documented and samples should be collected and analyzed and a report processed, as appropriate, to discover extent of compliance with the applicable "General" and specific (numerical) Stream Standards until a history of compliance is maintained for a period of at least two years.

The specific standards for Section 2-107 (all perennial reaches of the Rio San Jose in Cibola County from its confluence with the Rio Puerco upstream to Horace Springs) are given below:

2-107. All perennial reaches of the Rio San Jose in Cibola County from its confluence with the Rio Puerco upstream to Horace Springs.

- A. Designated Uses: coldwater fishery, domestic water supply, fish culture, irrigation, livestock and wildlife watering, and primary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20°C (68°), and turbidity shall be less than 25 FTU.
2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.
3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

All of the Rio San Jose numerical standards are based on the State's definitions and criteria for either coldwater fishery (D.O., temperature, and pH) or primary contact recreation (bacteria, algae and turbidity). Domestic water is also protected elsewhere (Section 202.B, New Mexico Regulations Governing Water Supplies) in the regulations for eight metals and toxic levels of nitrate, although the General Standards require that water for food crops be "virtually free" of Salmonella and Shigilla.

Copies of the current uses and their definitions and standards are enclosed (Enclosure 2).

This current list of uses under Section 2-107 is almost identical to what we sought in 1981. The fishery use is limited to coldwater. We prefer the "high quality" designation because it contains additional numerical standards for ammonia, chlorine, nutrients, organic carbon, turbidity and conductivity. This



designation also defines a superior overall fishery habitat. Most importantly, the benefits of limiting nutrients, organic material, and conductivity extend to the irrigation and primary contact uses. These numerical high-quality coldwater fishery standards provide the numerical standards that ensure compliance with the current General Standard (Enclosure 1) that the water be free of "plant nutrients from other than natural causes" (see Section E., Section 1-1-02 of General Standards).

The BIA wishes to quantify the Standards in order that each actual and attainable use be protected. Table 1 lists the uses, existing standards, and the standards that should be added to provide the Pueblos the highest practicable degree of protection for their actual and attainable uses.

<u>Use</u>	<u>Existing (1985) Standards</u>	<u>Additional Standard needed</u>
Coldwater fishery	D.O. >6.0 mg/l Temp.-20°C pH-6.6 to 8.8	ammonia <0.02 mg/l. chlorine <0.002 mg/l. phosphorus <0.1 mg/l. nitrogen <1.0 mg/l. T.O.C. <7.0 mg/l.
Domestic water supply	8 metals and nitrate	none
Irrigation	No Salmonella or Shigella	SAR <2.8 conductivity <1000 umho-cm (Also phosphorus nitrogen & phytoplankton per fishery and primary contact).
Fish culture	None	None
Livestock & Wildlife	None	None
Primary contact	fecal coli - 100/100 ml, free of nuisance algae, Turbidity - 25 FTU.	phytoplankton <500/ml. No odor of H <sub>2</sub> S from water or substrate.
All Uses for Section 2-107		Annual (low flow, summer- time) Survey of the stream between Horace Springs and McCartys survey includes diel sampling for D.O. and pH at least 3 water samples for the other constituents (covered in the stream standards) at

<u>Use</u>	<u>Existing (1985) Standards</u>	<u>Additional Standard needed</u>
		appropriate stations. A report shall be prepared and rendered until a history of compliance is maintained for at least two years.

Table 1.--Uses and standards for Section 2-107 of the New Mexico Water Quality Standards.

This table of additional Stream Standards needed is based on the recent studies of water quality and fishery and irrigation needs. Data show that un-ioned ammonia and residual chlorine are actual problems for fishery. The sodium and conductivity limits are based on mass balance calculations of the unpolluted water available to the Pueblos.

A Stream Standard for irrigation of 90 mg/l sodium would about half our SAR and represents the mixing of Horace springs with a sewage effluent of 125 mg/l. This implies correction to one-half of the present effluent concentration of 260 mg/l. Some Grants City wells have sodium values in the range 50 to 70 mg/l according to Gordon (1957) suggesting that substitute low-sodium water is available. A representative SAR standard of 2.3 would allow crop yields to improve.

The conductivity standard of 1000 umho-cm would restore crop yields by about 35 percent, assuming a linear relationship, and is based on the Horace Spring flow mixing with 2100 umho-cm effluent to cause the present conductivity of irrigation water equal to 1350 umho-cm. Correcting the sewage effluent to 1000 umho-cm from the present 2100 umho-cm may be impractical because influent sources at wells are already near 1000 umho-cm, and these will be concentrated by a factor of 1.5 to 2 while passing through the City system. An alternate method to changing the Stream Standards could be a zero-discharge plan for the sewage effluent.

The phytoplankton and odor standards should be attached to quantify the merely descriptive language now in effect for algae control.

There are no benefits to the Pueblo from receiving the sewage effluent. Several options are available that could restore the original fresh water supply to the Pueblo. Several methods are available to divert the effluent away from the Rio San Jose. These could include land treatment by spraying water on the malpais area where the sludge disposal operation is in effect, sufficient acreage is now available, overland flow on the Gottlieb properties where topographic gradients are amenable, lagoon treatment in Laguna Chical where several months of storage is available at elevations below the sewage plant outfall in an area large enough to evaporate the majority of the flow, or

deep well disposal in the Yaso Formation the feasibility of which has been demonstrated at the Anaconda millsite. This approach, zero-discharge to the Rio San Jose, appears to be a practical solution for restoring all the attainable uses of the Rio San Jose. Another solution consists of cleaning up the sewage and forming a conscientious monitoring plan with you. The Stream Standards listed here are a viable solution for achieving a fishable, swimmable stream with good water quality for irrigation of food crops. For these reasons the BIA requests that one of these solutions be enforced as a cooperative plan.

Sincerely,

/s/ Sidney L. Mills

Area Director

Enclosures

340:JWELLS:lmc:3-10-86

340:Retype per 300/100:corrections:lmc:3-12-86

1103-01            Reading

II.a(11b)A        300 RF

101-02            100 RF

*Attachment 3.*

OFFICIAL FILE COPY		
Office	Surname	Date
340	John	Apr 2-86
340	Wells for White	Apr 3-86
340	Murphy	4-3-86
340	Murphy	4-3-86

340-Rights Protection

APR 04 1986

Ms. Denise D. Fort  
 Director, Environmental Improvement Division  
 P.O. Box 968  
 Santa Fe, New Mexico 87504-0968

Dear Ms. Fort:

The Bureau of Indian Affairs (BIA), acting in its trust responsibility for the Indian tribes living in New Mexico, would like to provide assistance and cooperation among the tribes and the State regarding the State's prescribed protocols for water quality assessment. The BIA has some major concerns regarding use of this protocol when dealing with Federal trust lands within New Mexico.

A historical perspective of the Indian community is needed to understand where your protocol may fail. The Indian Reorganization Act of 1934 provided for Indian self-government. The council within each tribe is the main governing body and enforces by resolution most events in the day to day operation on their lands. A resolution is needed to approve of drilling sites for groundwater just as a resolution would have to take place to begin a water quality assessment of one of New Mexico's stream segments on Indian land. The resolution may be a part of a tribal water policy; the policy may explain the rights to and inherent sovereign power over the ground and surface waters which are critical to the tribes' survival.

Section 104-D of the State's regulations governing water quality related inspections addresses the legal implications of denied access to the EID to a particular location. The religious doctrines as part of a tribe's strong cultural existence, dictate periods of time during the year when access on the trust land is strictly prohibited. Each of New Mexico's Pueblos and Reservations is a unique and semi-sovereign entity and the religious ceremonies are usually closed to non-Indians. Accordingly, unannounced or uncontrolled access cannot be expected on Indian trust lands.

The BIA wants to cooperate with the State of New Mexico to begin a successful sampling program on the perennial stream segments on Indian trust lands. Initially, the BIA will need to communicate the availability and value of the Environmental Improvement Division's sampling program for classification and monitoring of their perennial stream segments and springs to each tribe individually. We understand the New Mexico Water Quality Control Commission's regulations for

Attachment 3

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designation of uses for surface waters and prescription of water quality standards for the protection of specific designated uses of the surface waters. Your stream water quality sampling and monitoring program could help to protect existing tribal uses or define the means to upgrade segments for past tribal uses. However, it is up to each individual Pueblo or tribe to adopt a tribal resolution establishing a cooperative agreement with the State to allow water quality sampling and stream classification to occur on Indian trust lands. Therefore, the BIA hopes to cooperate with the State of New Mexico by providing technical assistance to the tribes for following a protective water policy.

Sincerely,

/s/ Sidney L. Mills

Area Director

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*Appendix A: Water Quality Standards  
For Interstate and Intrastate Streams  
in New Mexico*

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1-101. ANTIDegradation POLICY AND IMPLEMENTATION PLAN.

A. Antidegradation Policy: Degradation of waters the quality of which is better than the stream standards established by the New Mexico Water Quality Control Commission is not reasonable degradation and is subject to abatement under the authority granted the Commission by the New Mexico Water Quality Act, as amended, unless it is justifiable as a result of necessary economic and social development. Existing instream water uses shall be maintained and protected. No degradation shall be allowed in high quality waters of designated national and state parks and wildlife refuges if such degradation would impair any of the qualities which caused designation of the parks and wildlife refuges. To protect the existing quality of water, the Commission under that Act will require the highest and best degree of effluent treatment practicable. In those cases where potential water quality impairment associated with a thermal discharge is involved, this antidegradation policy shall be consistent with Section 316 of the federal Clean Water Act. In implementing this section, the Commission through the appropriate regional offices of the United States Environmental Protection Agency will keep the Administrator advised and provided with such information concerning the waters of New Mexico as he will need to discharge his responsibilities under the federal Clean Water Act.

B. Implementation Plan: The New Mexico Environmental Improvement Division, acting under authority delegated by the Commission, implements the water quality standards, including the antidegradation policy, by establishing and maintaining controls on the discharge of pollutants to surface waters. This stepwise process involves several interrelated programs and is summarized in the following paragraphs. The division:

1. obtains information pertinent to the impact of the effluent on the receiving water and advises the prospective discharger of requirements for obtaining a permit to discharge;

2. reviews the adequacy of the existing data base and, if needed, obtains additional data by conducting an intensive survey of the receiving water;

3. assesses the probable impact of the effluent on the receiving water relative to its designated uses and numeric and narrative standards;

4. requires the highest and best degree of wastewater treatment practicable and commensurate with protecting and maintaining the designated uses and existing water quality of the receiving water;

5. develops water quality based effluent limitations and comments on technology based effluent limitations, as appropriate, for inclusion in any federal permit issued to a discharger pursuant to Section 402 of the Clean Water Act;



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WATER QUALITY CONTROL COMMISSION  
Post Office Box 968 - Crown Building  
Santa Fe, New Mexico 87504-0968  
Phone: (505) 984-0020 Ext 318

WQCC 85-1

WATER QUALITY STANDARDS FOR INTERSTATE AND INTRASTATE STREAMS  
IN NEW MEXICO

(Supersedes WQCC 81-1 filed May 5, 1981, and  
Amendments No. 1 and No. 2 filed May 11, 1982 and June 8, 1982)

PART 1

1-100. INTRODUCTION AND AUTHORITY.

A. The purpose of these standards is to designate the uses for which the surface waters of the State of New Mexico shall be protected and to prescribe the water quality standards necessary to sustain the designated uses.

B. These standards are consistent with Section 101(a)(2) of the federal Clean Water Act, as amended, (33 U.S.C. 1251 et seq.) which declares that "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983...." Agricultural, municipal, domestic and industrial water supply are other essential uses of New Mexico's water; however, water contaminants resulting from these activities will not be permitted to lower the quality of streams below that which is required for recreation and maintenance of a fishery, where practicable.

C. These standards are adopted by the Water Quality Control Commission under the authority of Paragraph C, Section 74-6-4 of the New Mexico Water Quality Act (NMSA 1978).

D. Part 3 of the Water Quality Control Commission Regulations includes standards to protect ground water and regulations controlling discharges onto or below the surface of the ground.

E. Adopted August 22, 1973; revised September 29, 1975, January 13, 1976, February 8, 1977, March 14, 1978, May 23, 1979, July 8, 1980, April 22, 1981, May 11, 1982, June 8, 1982, November 20, 1984, and January 8, 1985.

WQCC 85-1

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February 15, 1985

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6. requires that these effluent limitations be included in any such permit as a condition for state certification pursuant to Section 401 of the federal Clean Water Act;

7. coordinates its water pollution control activities with other constituent agencies of the Commission, and with local, state and federal agencies, as appropriate;

8. develops and pursues inspection and enforcement programs to ensure that dischargers comply with state regulations, and complements EPA's enforcement of federal permits;

9. ensures that the provisions for public participation required by the New Mexico Water Quality Act and the federal Clean Water Act are followed;

10. provides continuing technical training for wastewater treatment facility operators through the utility operators training and certification programs;

11. provides funds to assist the construction of publicly owned wastewater treatment facilities through the construction grants program authorized by Section 201 of the federal Clean Water Act, and through funds appropriated by the New Mexico Legislature;

12. conducts water quality surveillance of the waters of the State to assess the effectiveness of water pollution controls and to determine whether water quality standards are being attained; and

13. encourages, in conjunction with other state agencies, voluntary implementation of the management practices set forth in the "State of New Mexico Water Quality Management Plan."

#### 1-102. GENERAL STANDARDS.

The following general standards apply at all times (unless otherwise specified in Part 2) to all surface waters of the State which are suitable for recreation and support of desirable aquatic life presently common in New Mexico waters:

A. Stream Bottom Deposits: The stream shall be free of water contaminants from other than natural causes that will settle and adversely inhibit the growth of normal flora and fauna or significantly alter the physical or chemical properties of the bottom. Siltation resulting from the reasonable operation of irrigation and flood control facilities is not subject to these standards.

B. Floating Solids, Oil and Grease: Receiving water shall be free of objectionable oils, scum, grease and other floating materials resulting from other than natural causes.

C. Color: Color-producing materials resulting from other than natural causes shall not create an aesthetically undesirable condition nor should color impair the use of the water by desirable aquatic life presently common in New Mexico waters.

D. Odor and Taste of Fish: Water contaminants from other than natural causes shall be limited to concentrations that will not impart unpalatable flavor to fish, or result in offensive odor arising from the stream or otherwise interfere with the reasonable use of the water.

E. Plant Nutrients: Plant nutrients from other than natural causes shall not be present in concentrations which will produce undesirable aquatic life or result in a dominance of nuisance species in receiving waters.

F. Hazardous Substances: Toxic substances such as, but not limited to, pesticides, herbicides, heavy metals, and organics, shall not be present in receiving waters in concentrations which will change the ecology of receiving waters to an extent detrimental to man or other organisms of direct or indirect commercial, recreational, or aesthetic value. Toxicities of substances in receiving waters will be determined by appropriate bioassay techniques, or other acceptable means, for the particular form of aquatic life which is to be preserved with the concentrations of toxic substances not to exceed 5% of the 96-hour LC-50 provided that: toxic substances which, through uptake in the aquatic food chain and/or storage in plant and animal tissues, can be magnified to levels which are toxic to man or other organisms, shall not be present in concentrations which result in this biological magnification. Waters used for domestic water supplies shall not contain substances in concentrations that exceed drinking water standards set forth in Section 202.B of the New Mexico Regulations Governing Water Supplies.

G. Radioactivity: The radioactivity of surface waters shall be maintained at the lowest practical level and shall in no case exceed the standards set forth in Part 4 of New Mexico Environmental Improvement Board Radiation Protection Regulations, adopted April 18, 1980.

H. Pathogens: The stream shall be virtually free of pathogens. In particular, waters used for irrigation of table crops such as lettuce shall be virtually free of Salmonella and Shigella species.

I. Temperature: Maximum temperatures for each stream reach have been specified in Part 2 of these standards. However, the introduction of heat by other than natural causes shall not increase the temperature, as measured from above the point of introduction, by more than 2.7 C (5 F) in a stream, or more than 1.7 C (3 F) in a lake or reservoir. In no case will the introduction of heat be permitted when the maximum temperature specified for the reach (generally 20 C (68 F) for coldwater fisheries and 32.2 C (90 F) for warmwater fisheries) would thereby be exceeded. These

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temperature standards shall not apply to impoundments constructed offstream for the purpose of heat disposal. High water temperatures caused by unusually high ambient air temperatures or the reasonable operation of irrigation and aquacultural facilities are not violations of these standards.

J. Turbidity: Turbidity attributable to other than natural causes shall not reduce light transmission to the point that desirable aquatic life presently common in New Mexico waters is inhibited or that will cause substantial visible contrast with the natural appearance of the water. Turbidity attributable to natural causes or the reasonable operation of irrigation and flood control facilities is not subject to these standards.

K. Salinity: Where existing information is sufficient numerical standards for total dissolved solids (or conductivity), chlorides and sulfates, have been adopted in Part 2 of these standards.

1. For the tributaries of the Colorado River System, the State of New Mexico will cooperate with the Colorado River Basin States and the federal government to support and implement the salinity policy and program outlined in the report "1984 Review, Water Quality Standards for Salinity, Colorado River System" dated May 1, 1984, and the supplement thereto dated July 25, 1984.

2. Numeric criteria for salinity are established at three points in the Colorado River Basin as follows: below Hoover Dam, 723 mg/l; below Parker Dam, 747 mg/l; and at Imperial Dam, 879 mg/l.

3. As a part of the program, objectives for New Mexico shall include the elimination of discharges of water containing solids in solution as a result of the use of water to control or convey fly ash from coal-fired electric generators, wherever practicable.

4. In determining compliance with the numeric criteria hereby adopted, salinity (TDS) is determined by the "calculation method" (sum of constituents) as described in the latest edition of "Techniques of Water-Resources Investigations of the United States Geological Survey, Methods for Collection and Analysis of Water Samples for Dissolved Minerals and Gases."

L. Dissolved Gases: Surface waters shall be free of nitrogen and other dissolved gases at levels above 110% saturation when this supersaturation is attributable to municipal, industrial or other discharges.

M. Mixing Zones: In any waters receiving a waste discharge, a continuous zone must be maintained where the water is of adequate quality to allow the migration of all desirable aquatic life presently common in New Mexico waters with no significant effect on their populations.

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Wastewater mixing zones, in which the standards in Part 2 may be exceeded, shall generally be less than 1/4 of the cross-sectional area of a receiving stream or the volume below 1/100 of the surface area of a receiving reservoir.

1-103. SAMPLING AND ANALYSIS.

A. All methods of sample collection, preservation and analysis used in determining water quality and maintenance of these standards shall be in accordance with procedures prescribed by the latest edition of:

1. "Standard Methods for the Examination of Water and Wastewater," American Public Health Association; or
2. "Methods for Chemical Analysis of Water and Wastes" and other publications of the Analytical Quality Control Laboratory, EPA; or
3. "National Handbook of Recommended Methods for Water-Data Acquisition," U.S. Geological Survey.

B. Bacteriological Surveys: The monthly logarithmic mean used in reporting bacteriological data shall be based on a minimum of five samples collected in a 30-day period.

C. Sampling Procedures:

1. Streams: Stream monitoring stations below waste discharges shall be located a sufficient distance downstream to ensure adequate vertical and lateral mixing.
2. Reservoirs: Sampling stations in reservoirs shall be located at least 250 feet from a waste discharge.
3. Reservoirs: Except for the restriction specified in Paragraph 103.C.2, reservoir sampling stations shall be located at any site where the attainment of a water quality standard is to be assessed. Water quality measurements taken at intervals in the water column at a sampling station shall be averaged for the epilimnion, or in the absence of an epilimnion, for the upper 1/3 of the water column of the reservoir to determine attainment of standards.

1-104. REVIEW OF STANDARDS, NEED FOR ADDITIONAL STUDIES.

A. Section 303(c)(1) of the federal Clean Water Act requires that public hearings be held at least once every three years for the purpose of reviewing and proposing necessary revisions of these water quality standards.

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B. It is recognized that, in some cases, numeric standards have been adopted which reflect stream use designations rather than existing stream conditions. Narrative standards are required for many constituents because accurate data on background levels are lacking. More intensive water quality monitoring may identify stream reaches where existing quality is considerably better than the established standards. When justified by sufficient data and need, the stream standards will be modified to reflect true stream conditions.

C. It is also recognized that contributions of water contaminants by diffuse non-point sources of water pollution may make attainment of certain standards difficult. Revision of these standards may be required as new information is obtained on non-point sources and other problems unique to semi-arid regions.

1-105. APPLICABILITY OF SALINITY STANDARDS.

The numerical standards for salinity set out in Part 2 shall apply at the downstream point of the reach in question.

PART 2

STREAM USE DESIGNATIONS AND STANDARDS<sup>1</sup>

2-100. RIO GRANDE BASIN.

2-101. The main stem of the Rio Grande from the International Boundary and Water Commission sampling station above American Dam at El Paso upstream to one mile below Percha Dam.<sup>2</sup>

A. Designated Uses: irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall not exceed 34 C (93.2 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At mean monthly flows above 350 cfs, the monthly average concentration for: TDS shall be less than 2,000 mg/l, sulfate shall be less than 500 mg/l, and chlorides shall be less than 400 mg/l.

2-102. The main stem of the Rio Grande from one mile below Percha Dam upstream to the headwaters of Caballo Reservoir including Caballo Reservoir.<sup>3</sup>

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<sup>1</sup> These standards apply at all flows unless specified otherwise.

<sup>2</sup> Sustained flow in this reach is dependent on the release from Caballo Reservoir during the irrigation season; at other times of the year there is little or no flow; standards apply only at flows above 350 cfs.

<sup>3</sup> Sustained flow in the stream reach below Caballo Reservoir is dependent on release from Caballo Reservoir during the irrigation season; at other times of the year, there is little or no flow; standards apply to this stream reach only at flows above 350 cfs. Also, these standards do not apply in Caballo Reservoir at pool sizes below 25,000 acre feet.

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2-100. RIO GRANDE BASIN. (Continued)

A. Designated Uses: irrigation, livestock and wildlife watering, primary contact recreation, and warmwater fishery.

B. Standards:

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l except for brief periods (6 hours or less) of not less than 4.0 mg/l, pH shall be within the range of 6.0 to 9.0, temperature shall be less than 32.2 C (90 F), and turbidity shall be less than 50 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

2-103. The main stem of the Rio Grande from the headwaters of Caballo Lake upstream to Elephant Butte Dam and perennial reaches of tributaries to the Rio Grande in Sierra County.<sup>1</sup>

A. Designated Uses: fish culture, irrigation, livestock and wildlife watering, marginal coldwater fishery, secondary contact recreation, and warmwater fishery.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 25 C (77 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-104. Elephant Butte Reservoir.

A. Designated Uses: irrigation storage, livestock and wildlife watering, primary contact recreation, and warmwater fishery.

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<sup>1</sup> Flow in this reach of the Rio Grande main stem is dependent upon release from Elephant Butte Dam. Main stem standards apply only during flows in excess of 100 cfs.



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2-100. RIO GRANDE BASIN. (Continued)

B. Standards:<sup>2</sup>

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l except for brief periods (6 hours or less) of not less than 4.0 mg/l, pH shall be within the range of 6.6 to 9.0, temperature shall be less than 32.2 C (90 F), and turbidity shall be less than 50 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions and gastrointestinal or skin disorders.

2-105. The main stem of the Rio Grande from the headwaters of Elephant Butte upstream to the Angostura Diversion Works, including any flow below the perennial reaches of the Rio Puerco and Jemez River which enters the main stem of the Rio Grande.

A. Designated Uses: irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 4.0 mg/l, pH shall be within the range of 6.0 to 9.0, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At mean monthly flows above 100 cfs, the monthly average concentration for: TDS shall be less than 1,500 mg/l, sulfate shall be less than 500 mg/l, and chloride shall be less than 250 mg/l.

2-106. The Jemez River and all its tributaries above the Town of Jemez Springs, perennial reaches of Vallecito Creek, the Guadalupe River and all its tributaries, Bluewater Creek, Rio Moquino, Seboyeta Creek, Rio Paguante, and all other perennial reaches of tributaries to the Rio Puerco except the Rio San Jose.

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<sup>2</sup> These standards do not apply at pool sizes below 100,000 acre feet.

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2-100. RIO GRANDE BASIN. (Continued)

A. Designated Uses: domestic water supply, fish culture, high quality coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 400 umhos (700 umhos for perennial reaches of Vallecito Creek); dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-107. All perennial reaches of the Rio San Jose in Cibola County from its confluence with the Rio Puerco upstream to Horace Springs.

A. Designated Uses: coldwater fishery, domestic water supply, fish culture, irrigation, livestock and wildlife watering, and primary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20 C (68 F), and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

2-108. The main stem of the Rio Grande from Angostura Diversion Works upstream to Cochiti Dam.

A. Designated Uses: irrigation, livestock and wildlife watering, secondary contact recreation, coldwater fishery, and warmwater fishery.

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2-100. RIO GRANDE BASIN. (Continued)

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 9.0, and temperature shall be less than 25 C (77 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-109. Cochiti Reservoir.

A. Designated Uses: livestock and wildlife watering, warmwater fishery, coldwater fishery, and primary contact recreation.

B. Standards:

1. At any sampling site: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 20 C (68 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

2-110. The Santa Fe River from Cochiti Reservoir upstream to Siler Road.

A. Designated Uses: irrigation, livestock and wildlife watering, marginal coldwater fishery, secondary contact recreation, and warmwater fishery.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 4.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 30 C (86 F), and turbidity shall be less than 50 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml. and no more than 10% of the samples shall exceed 2,000/100 ml.

2-100. RIO GRANDE BASIN. (Continued)

3. At mean monthly flows above 100 cfs, the monthly average concentration for: TDS shall be less than 500 mg/l, sulfate shall be less than 150 mg/l, and chloride shall be less than 25 mg/l.

2-111. The main stem of the Rio Grande from the headwaters of Cochiti Reservoir upstream to Taos Junction Bridge including the main stem of Embudo Creek from its confluence with the Rio Grande upstream to the junction of the Rio Pueblo and the Rio Santa Barbara.

A. Designated Uses: irrigation, livestock and wildlife watering, marginal coldwater fishery, secondary contact recreation, and warmwater fishery.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.6, temperature shall be less than 22 C (71.6 F), and turbidity shall be less than 50 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At mean monthly flows above 100 cfs, the monthly average concentration for: TDS shall be less than 500 mg/l, sulfate shall be less than 150 mg/l, and chloride shall be less than 25 mg/l.

2-112. The perennial reaches of Rio del Oso, Abiquiu Creek, El Rito Creek above the Town of El Rito and Rio Vallecitos and all its tributaries.

A. Designated Uses: domestic water supply, irrigation, high quality coldwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 300 umhos; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

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2-100. RIO GRANDE BASIN. (Continued)

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-113. The Rio Chama from its confluence with the Rio Grande upstream to Abiquiu Reservoir, the Rio Tusas, and any flow below the perennial reaches of El Rito Creek and Rio Ojo Caliente which enters the main stem of the Rio Chama.

A. Designated Uses: irrigation, livestock and wildlife watering, marginal coldwater fishery, warmwater fishery, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 31 C (87.8 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-114. Abiquiu Reservoir.

A. Designated Uses: irrigation storage, livestock and wildlife watering, primary contact recreation, coldwater fishery, and warmwater fishery.

B. Standards:

1. At any sampling site: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 25 C (77 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

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2-100. RIO GRANDE BASIN. (Continued)

2-115. The Rio Chama from the headwaters of Abiquiu Reservoir upstream to El Vado Reservoir and the Rio Gallina and Rio Puerco de Chama north of State Highway 96.

A. Designated Uses: irrigation, livestock and wildlife watering, coldwater fishery, warmwater fishery, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 26 C (78.8 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-116. All perennial reaches of tributaries to the Rio Chama above Abiquiu Reservoir except the Rio Gallina and Rio Puerco de Chama north of State Highway 96 and the main stem of the Rio Chama from the headwaters of El Vado Reservoir upstream to the New Mexico-Colorado line.

A. Designated Uses: domestic water supply, fish culture, high quality coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 500 umhos (1,000 umhos for Coyote Creek); dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

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2-100. RIO GRANDE BASIN. (Continued)

2-117. El Vado and Heron Reservoirs.

A. Designated Uses: irrigation storage, wildlife and livestock watering, primary contact recreation, and coldwater fishery.

B. Standards:

1. At any sampling site: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20 C (68 F), and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause a nuisance condition or gastrointestinal or skin disorders.

2-118. All perennial reaches of tributaries to the Rio Grande in Santa Fe County except the Santa Fe River below Siler Road.

A. Designated Uses: domestic water supply, high quality coldwater fishery, irrigation, livestock and wildlife watering, municipal and industrial water supply, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l, conductivity shall be less than 300 umhos; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-119. The main stem of the Rio Grande from Taos Junction Bridge upstream to the Colorado-New Mexico line, the Red River from its confluence with the Rio Grande upstream to a point 1.5 miles above the bridge at the Red River Fish Hatchery, and the Rio Pueblo de Taos from its confluence with the Rio Grande upstream to Los Cordovas.

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2-100. RIO GRANDE BASIN. (Continued)

A. Designated Uses: coldwater fishery, fish culture, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20 C (68 F), and turbidity shall be less than 50 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-120. The Red River from a point 1.5 miles above the bridge at the Red River Fish Hatchery upstream to its headwaters including all tributaries thereto and all other perennial reaches of tributaries to the Rio Grande in Taos and Rio Arriba counties.

A. Designated Uses: domestic water supply, fish culture, high quality coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 400 umhos (500 umhos for the Rio Fernando de Taos); dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.



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2-200. PECOS RIVER BASIN.

2-201. The main stem of the Pecos River from the New Mexico-Texas line upstream to Malaga.

A. Designated Uses: irrigation, livestock and wildlife watering, secondary contact recreation, and warmwater fishery.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At all flows above 50 cfs: TDS shall be less than 20,000 mg/l, sulfate shall be less than 3,000 mg/l, and chloride shall be less than 10,000 mg/l.

2-202. The main stem of the Pecos River from Malaga upstream to Lower Tansil Dam, including Black River.<sup>1</sup>

A. Designated Uses: industrial water supply, irrigation, livestock and wildlife watering, secondary contact recreation, and warmwater fishery.

B. Standards:

1. In any single sample, dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 9.0, and temperature shall be less than 34 C (93.2 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At all flows above 50 cfs: TDS shall be less than 8,500 mg/l, sulfate shall be less than 2,500 mg/l, and chloride shall be less than 3,500 mg/l.

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<sup>1</sup> Diversion for irrigation frequently limits summer flow in this reach to that contributed by springs along the watercourse. Suitable conditions for a warmwater fishery cannot be maintained during the summer unless there is significant release from Lower Tansil Dam and Harroun Dam.

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2-200. PECOS RIVER BASIN. (Continued)

2-203. The main stem of the Pecos River from Lower Tansil Dam upstream to Avalon Dam, including Tansil Lake.

A. Designated Uses: industrial water supply, livestock and wildlife watering, primary contact recreation, and warmwater fishery.

B. Standards:

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 34 C (93.2 F), and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

2-204. The main stem of the Pecos River from Avalon Dam upstream to Lake McMillan Dam, including Avalon Reservoir.

A. Designated Uses: irrigation storage, livestock and wildlife watering, secondary contact recreation, and warmwater fishery.

B. Standards:<sup>1</sup>

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-205. Lake McMillan.

A. Designated Uses: irrigation storage, livestock and wildlife watering, primary contact recreation, and warmwater fishery.

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<sup>1</sup> These standards do not apply at Avalon Reservoir when the pool size is below 1,200 acre feet.

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2-200. PECOS RIVER BASIN. (Continued)

B. Standards:<sup>1</sup>

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 200/100 ml, and no more than 10% of the samples shall exceed 400/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

2-206. The main stem of the Pecos River from the headwaters of Lake McMillan upstream to Acme, including flow from below the perennial reaches of the Rio Penasco, the Rio Hondo, and the Rio Felix which enters the main stem of the Pecos River.

A. Designated Uses: irrigation, livestock and wildlife watering, secondary contact recreation, and warmwater fishery.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At all flows above 50 cfs: TDS shall be less than 14,000 mg/l, sulfate shall be less than 3,000 mg/l, and chloride shall be less than 6,000 mg/l.

2-207. The main stem of the Pecos River from Acme upstream to Sumner Dam.

A. Designated Uses: fish culture, irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

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<sup>1</sup> These standards do not apply at pool sizes below 6,000 acre feet.

2-200. PECOS RIVER BASIN. (Continued)

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At all flows above 50 cfs: TDS shall be less than 8,000 mg/l, sulfate shall be less than 2,500 mg/l, and chloride shall be less than 4,000 mg/l.

2-208. Perennial reaches of the Rio Penasco and its tributaries above Dunken, and perennial reaches of Bonito Creek below Angus, the Rio Ruidoso below Seeping Springs Lakes, and Agua Chiquita.

A. Designated Uses: fish culture, irrigation, livestock and wildlife watering, marginal coldwater fishery, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 30 C (86 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-209. Eagle Creek above Alto Reservoir, Bonito Creek upstream of Angus, and the Rio Ruidoso and its tributaries above Seeping Springs Lakes.

A. Designated Uses: domestic water supply, fish culture, high quality coldwater fishery, irrigation, livestock and wildlife watering, municipal and industrial water supply, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 600 umhos in Eagle Creek, 1,100 umhos in Bonito Creek, and 1,500 umhos in the Rio Ruidoso; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is

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2-200. PECOS RIVER BASIN. (Continued)

greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-210. Sumner Reservoir.

A. Designated Uses: irrigation storage, livestock and wildlife watering, primary contact recreation, and warmwater fishery.

B. Standards:<sup>1</sup>

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 32.2 C (90 F), and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause a nuisance condition or gastrointestinal or skin disorders.

2-211. The main stem of the Pecos River from the headwaters of Sumner Lake upstream to Anton Chico, including any flow from below the perennial reaches of the Gallinas River that enters the main stem of the Pecos River.

A. Designated Uses: fish culture, irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

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<sup>1</sup> These standards do not apply at pool sizes below 24,000 acre feet.

2-200. PECOS RIVER BASIN. (Continued)

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At all flows above 50 cfs: TDS shall be less than 3,000 mg/l, sulfate shall be less than 2,000 mg/l, and chloride shall be less than 400 mg/l.

2-212. The Gallinas River and all its tributaries above the diversion for the Public Service Company Reservoir and perennial reaches of Tecolote Creek.

A. Designated Uses: domestic water supply, high quality coldwater fishery, irrigation, livestock and wildlife watering, municipal and industrial water supply, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 300 umhos; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-213. The main stem of the Pecos River from Anton Chico upstream to one river mile below the bridge on State Highway 223.

A. Designated Uses: irrigation, livestock and wildlife watering, marginal coldwater fishery, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 30 C (86F).

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2-200. PECOS RIVER BASIN. (Continued)

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

3. At all flows above 10 cfs: TDS shall be less than 250 mg/l, sulfate shall be less than 25 mg/l, and chloride shall be less than 5 mg/l.

2-214. Cow Creek and all its tributaries and the main stem of the Pecos River from one river mile below the bridge on State Highway 223 upstream to its headwaters, including all tributaries thereto.

A. Designated Uses: domestic water supply, fish culture, high quality coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 300 umhos; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

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2-300. CANADIAN RIVER BASIN.

2-301. The main stem of the Canadian River from the New Mexico-Texas line upstream to Ute Dam, and any flow which enters the main stem from Revuelto Creek.

A. Designated Uses: irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 32.2 C (90 F), and TDS shall be less than 6,500 mg/l at flows above 25 cfs.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-302. Ute Reservoir.

A. Designated Uses: livestock and wildlife watering, municipal and industrial water supply, primary contact recreation, and warmwater fishery.

B. Standards:<sup>1</sup>

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, turbidity shall be less than 25 FTU, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause nuisance conditions or gastrointestinal or skin disorders.

2-303. The main stem of the Canadian River from the headwaters of Ute Reservoir upstream to Conchas Dam and all of Ute Creek.

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<sup>1</sup> These standards do not apply at pool sizes below 50,000 acre feet.



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2-300. CANADIAN RIVER BASIN. (Continued)

A. Designated Uses: irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-304. Conchas Reservoir.

A. Designated Uses: irrigation storage, livestock and wildlife watering, primary contact recreation and warmwater fishery.

B. Standards:<sup>1</sup>

1. At any sampling site: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 32.2 C (90 F), and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause a nuisance condition or gastrointestinal or skin disorders.

2-305. The main stem of the Canadian River from the headwaters of Conchas Reservoir upstream to State Highway 56, and Conchas River and any flow from below the perennial reaches of the Mora River, Cimarron River, Vermejo River, and Chicorica Creek which enters the main stem of the Canadian River.

A. Designated Uses: irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

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<sup>1</sup> These standards do not apply at pool sizes below 88,000 acre feet.

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2-300. CANADIAN RIVER BASIN. (Continued)

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 32.2 C (90 F), and TDS shall be less than 3,500 mg/l at flows above 10 cfs.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-306. All tributaries to the Mora River above the Town of Mora, Coyote Creek, all tributaries to the Cimarron River above the Town of Cimarron, Rayado Creek above Miami Lake diversion and all other tributaries to the Canadian River northwest and north of U.S. Highway 64 in Colfax County, and perennial reaches of the main stem of the Canadian River upstream from State Highway 56.

A. Designated Uses: domestic water supply, irrigation, high quality coldwater fishery, livestock and wildlife watering, municipal and industrial water supply, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; and total organic carbon shall be less than 7 mg/l.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

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**2-400. SAN JUAN RIVER BASIN.**

**2-401.** The main stem of the San Juan River from the point where the San Juan leaves New Mexico and enters Colorado upstream to State Highway 17 at Blanco, and any flow which enters the San Juan River from the Mancos and Chaco Rivers.

A. Designated Uses: industrial water supply, irrigation, livestock and wildlife watering, secondary contact recreation, marginal coldwater fishery, and warmwater fishery.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

**2-402.** La Plata River from its confluence with the San Juan River upstream to the New Mexico-Colorado line.

A. Designated Uses: irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

**2-403.** The Animas River from its confluence with the San Juan upstream to U.S. Highway 550 at Aztec.

A. Designated Uses: industrial water supply, irrigation, livestock and wildlife watering, marginal coldwater fishery, secondary contact recreation, and warmwater fishery.

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2-400. SAN JUAN RIVER BASIN. (Continued)

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 27 C (80.6 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-404. The Animas River from U.S. Highway 550 upstream to the New Mexico-Colorado line.

A. Designated Uses: coldwater fishery, irrigation, livestock and wildlife watering, municipal and industrial water supply, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20 C (68 F), and total phosphorus shall be less than 0.1 mg/l.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-405. The main stem of the San Juan River from State Highway 17 at Blanco upstream to the Navajo Dam.

A. Designated Uses: high quality coldwater fishery, irrigation, livestock and wildlife watering, municipal and industrial water supply, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

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2-400. SAN JUAN RIVER BASIN. (Continued)

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-406. Navajo Reservoir in New Mexico.

A. Designated Uses: coldwater fishery, warmwater fishery, irrigation storage, livestock and wildlife watering, municipal and industrial water storage, and primary contact recreation.

B. Standards:

1. At any sampling site: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20 C (68 F), total phosphorus shall be less than 0.1 mg/l, and turbidity shall be less than 25 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

3. The open water shall be free of algae in concentrations which cause a nuisance condition or gastrointestinal or skin disorders.

2-407. The Navajo and Los Pinos Rivers in New Mexico.

A. Designated Uses: coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20 C (68 F), and total phosphorus shall be less than 0.1 mg/l.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

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2-500. GILA RIVER BASIN.

2-501. The main stem of the Gila River from the New Mexico-Arizona line upstream to Red Rock.

A. Designated Uses: irrigation, limited warmwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-502. The main stem of the Gila River from Red Rock upstream to Gila Hot Springs.

A. Designated Uses: industrial water supply, irrigation, livestock and wildlife watering, marginal coldwater fishery, secondary contact recreation, and warmwater fishery.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 28 C (82.4 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-503. The main stem of the Gila River from Gila Hot Springs upstream to the headwaters and all tributaries thereto and all other perennial tributaries to the Gila River above the Town of Cliff.

A. Designated Uses: domestic water supply, high quality coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

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2-500. GILA RIVER BASIN. (Continued)

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 300 umhos for the main stem of the Gila River above Gila Hot Springs and 400 umhos for other reaches; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F) except in the East Fork of the Gila River and Sapillo Creek below Lake Roberts where the temperature shall be less than 32.2 C (90 F); total chlorine residual shall be less than 0.002 mg/l; total phosphorus shall be less than 0.1 mg/l; total organic carbon shall be less than 7 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

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2-600. SAN FRANCISCO RIVER BASIN.

2-601. The main stem of the San Francisco River from the New Mexico-Arizona line upstream to the State Highway 12 at Reserve.

A. Designated Uses: irrigation, limited warmwater and marginal coldwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 5.0 mg/l, pH shall be within the range of 6.6 to 9.0, and temperature shall be less than 32.2 C (90 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-602. The main stem of the San Francisco River from State Highway 12 at Reserve upstream to the New Mexico-Arizona line.

A. Designated Uses: coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 20 C (68 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml, and no more than 10% of the samples shall exceed 2,000/100 ml.

2-603. All perennial reaches of tributaries to the San Francisco River above the Town of Glenwood.

A. Designated Uses: domestic water supply, fish culture, high quality coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.



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2-600. SAN FRANCISCO RIVER BASIN. (Continued)

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 400 umhos; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F) except in Tularosa Creek, where the temperature shall be less than 25 C (77 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-700. DRY CIMARRON RIVER.

2-701. Perennial portions of the Dry Cimarron River in Union and Colfax County.

A. Designated Uses: coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 20 C (68 F), TDS shall be less than 1,200 mg/l, sulfate shall be less than 600 mg/l, and chloride shall be less than 40 mg/l.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

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**2-800. CLOSED BASINS.**

**2-801.** Rio Tularosa lying east of the State Highway 70 bridge crossing east of Tularosa, and all perennial tributaries to the Tularosa Basin except Three Rivers.

A. Designated Uses: coldwater fishery, fish culture, irrigation, livestock and wildlife watering, municipal and industrial water supply, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 20 C (68 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

**2-802. Perennial reaches of Three Rivers.**

A. Designated Uses: irrigation, domestic water supply, high quality coldwater fishery, secondary contact recreation, and livestock and wildlife watering.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l; conductivity shall be less than 500 umhos; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

**2-803. The Mimbres River below Mimbres and all perennial reaches of tributaries thereto.**

A. Designated Uses: coldwater fishery, irrigation, livestock and wildlife watering, and secondary contact recreation.

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2-800. CLOSED BASINS. (Continued)

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, and temperature shall be less than 20 C (68 F).

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-804. The Mimbres River above Mimbres and all perennial tributaries thereto.

A. Designated Uses: irrigation, domestic water supply, high quality coldwater fishery, livestock and wildlife watering, and secondary contact recreation.

B. Standards:

1. In any single sample: un-ionized ammonia (as N) shall not exceed 0.02 mg/l, conductivity shall be less than 300 umhos; dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; total inorganic nitrogen (as N) shall be less than 1.0 mg/l; pH shall be within the range of 6.6 to 8.8; temperature shall be less than 20 C (68 F); total chlorine residual shall be less than 0.002 mg/l; total organic carbon shall be less than 7 mg/l; total phosphorus shall be less than 0.1 mg/l; and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml.

2-805. Perennial reaches of the Sacramento River (Sacramento-Salt Flat Closed Basin).

A. Designated Uses: domestic and municipal water supply, livestock and wildlife watering, marginal coldwater fishery, and secondary contact recreation.

B. Standards:

1. In any single sample: dissolved oxygen shall be greater than 6.0 mg/l, pH shall be within the range of 6.6 to 8.8, temperature shall be less than 25 C (77 F), and turbidity shall be less than 10 FTU.

2. The monthly logarithmic mean of fecal coliform bacteria shall be less than 200/100 ml, and no more than 10% of the samples shall exceed 400/100 ml.

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PART 3

3-100. DEFINITIONS.

A. "Coldwater Fishery" means a stream reach, lake or impoundment where the water temperature and other characteristics are suitable for the support of coldwater fishes such as brown, cutthroat, brook, or rainbow trout.

B. "cfs" means cubic feet per second.

C. "Domestic Water Supply" means a surface water that may be used for drinking or culinary purposes after disinfection.

D. "Fecal Coliform Bacteria" means the portion of the coliform group which is present in the gut or the feces of warmblooded animals. It generally includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at  $44.5 \pm 0.2$  C.

E. "Fish Culture" means production of coldwater or warmwater fish in a hatchery or rearing station.

F. "FTU" means formazin turbidity units (see "Standard Methods for the Examination of Water and Wastewater").

G. "High Quality Coldwater Fishery" means a perennial stream reach in a minimally disturbed condition which has considerable aesthetic value and is a superior coldwater fishery habitat. A stream reach to be so categorized must have water quality, stream bed characteristics, and other attributes of habitat sufficient to protect and maintain a propagating coldwater fishery (i.e., a population of reproducing salmonids).

H. "Interstate Waters" means all waters which cross or form a part of the border between States.

I. "Intrastate Waters" means all waters of the State which are not interstate waters.

J. "LC-50" means the concentration of a substance that is lethal to 50% of the test organisms within a defined time period.

K. "Limited Warmwater Fishery" means a stream reach where intermittent flow may severely limit the ability of the reach to sustain a natural fish population on a continuous annual basis; or a stream where historical data indicate that water temperature may exceed 32.2 C (90 F).

### 3-100. DEFINITIONS. (Continued)

L. "Limiting Nutrient" means the nutrient or combination of nutrients available in minimal quantities with respect to the growth requirements of algae and higher aquatic plants and upon which the growth of these organisms is therefore dependent.

M. "Marginal Coldwater Fishery" means a stream reach, lake or impoundment known to support a coldwater fish population during at least some portion of the year, even though historical data indicates that the maximum temperature in the stream may frequently exceed 20 C (68 F).

N. "Milligrams per liter (mg/l)" means milligrams of solute per liter of solution; equivalent to parts per million when the specific gravity of the solution = 1.000.

O. "Primary Contact" means any recreational or other water use in which there is prolonged and intimate contact with the water, such as swimming and water skiing, involving considerable risk of ingesting water in quantities sufficient to pose a significant health hazard.

P. "Secondary Contact" means any recreational or other water use in which contact with the water may occur and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, wading, commercial and recreational boating and any limited seasonal contact.

Q. "TDS" means total dissolved solids.

R. "Total Inorganic Nitrogen" means the sum of nitrate nitrogen, nitrite nitrogen, and total ammonia nitrogen.

S. "Warmwater Fishery" means a stream reach, lake or impoundment where the water temperature and other characteristics are suitable for the support of warmwater fishes such as large-mouth black bass, small-mouth black bass, crappie, white bass, bluegill, flathead catfish, or channel catfish.

T. Industrial water supply, municipal and industrial water supply, livestock and wildlife watering, irrigation storage, municipal and industrial water storage are self explanatory and no definitions are needed.

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3-101. STANDARDS APPLICABLE TO DESIGNATED USES ASSIGNED TO STREAM SEGMENTS  
IN PART 2.

A. Coldwater Fishery: Dissolved oxygen shall be greater than 6.0 mg/l, temperature shall be less than 20 C (68 F), and pH shall be within the range of 6.6 to 8.8.

B. Domestic Water Supply: Waters used for domestic water supplies shall not contain substances in concentrations that exceed drinking water standards set forth in Section 202.B of the New Mexico Regulations Governing Water Supplies.

C. High Quality Coldwater Fishery: Dissolved oxygen shall be greater than 6.0 mg/l or 85% of saturation, whichever is greater; temperature shall be less than 20 C (68 F);<sup>1</sup> pH shall be within the range of 6.6 to 8.8; un-ionized ammonia (as N) shall not exceed 0.02 mg/l; total chlorine residual shall be less than 0.002 mg/l; total phosphorus shall be less than 0.1 mg/l;<sup>2,3</sup> total inorganic nitrogen (as N) shall be less than 1.0 mg/l;<sup>2,3</sup> total organic carbon shall be less than 7 mg/l;<sup>2</sup> turbidity shall be less than 10 FTU (25 FTU in certain reaches where natural background prevents attainment of lower turbidity); conductivity shall be less than a limit varying between 300 umhos and 1,500 umhos depending on the natural background in particular stream reaches (the intent of this standard is to prevent excessive increases in dissolved solids which would result in changes in stream community structure).

D. Irrigation (or Irrigation Storage): The monthly logarithmic mean of fecal coliform bacteria shall be less than 1,000/100 ml and no more than 10% of the samples shall exceed 2,000/100 ml.

E. Limited Warmwater Fishery: Standards are the same as for "Warmwater Fishery" except on a case by case basis, the dissolved oxygen may reach a minimum of 4.0 mg/l or maximum temperatures may exceed 32.2 C.

F. Marginal Coldwater Fishery: Standards are the same as for "Coldwater Fishery" except on a case by case basis, the dissolved oxygen may reach a minimum of 5.0 mg/l or maximum temperatures may exceed 20 C, and the pH may range from 6.6 to 9.0.<sup>4</sup>

G. Primary Contact Recreation: The monthly logarithmic mean of fecal coliform bacteria shall be less than 100/100 ml, and no more than 10% of the samples shall exceed 200/100 ml;<sup>5</sup> the open water shall be free of algae in concentrations which cause a nuisance condition or gastrointestinal or skin disorders; pH shall be within the range of 6.6 to 9.0; and turbidity shall be less than 25 FTU.<sup>6</sup>

H. Warmwater Fishery: Dissolved oxygen shall be greater than 5 mg/l,<sup>4</sup> temperature shall be less than 32.2 C (90 F),<sup>7</sup> and pH shall be within the range of 6.0 to 9.0.

**3-101. STANDARDS APPLICABLE TO DESIGNATED USES ASSIGNED TO STREAM SEGMENTS  
IN PART 2. (Continued)**

I. Fish culture, livestock and wildlife watering, and municipal and industrial water supply and storage are also designated in particular stream reaches where these uses are actually being realized. However, no numerical standards apply uniquely to these uses. Water quality adequate for these uses is ensured by the general standards and numeric standards for bacterial quality, pH, and temperature which are established for all stream reaches listed in Part 2 of the standards.

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- <sup>1</sup> Temperatures greater than 20 C are specified in certain reaches of the Gila and San Francisco basins due to higher ambient water temperatures.
  - <sup>2</sup> No standards for total inorganic nitrogen and total phosphorus have been adopted for "high quality coldwater fisheries" in the Canadian River Basin due to field data indicating unusually high ambient levels.
  - <sup>3</sup> As the need arises, the State shall determine for specified stream segments or relevant portions thereof whether the limiting nutrient for the growth of aquatic plants is nitrogen or phosphorus. Upon such a determination the waters in question shall be exempt from the standard for the nutrient found to be not limiting. Until such a determination is made, standards for both nutrients shall apply. If co-limitation is found, the waters in question shall be exempt from the total inorganic nitrogen standard. The State shall make available a list of those waters for which the limiting nutrient has been determined.
  - <sup>4</sup> The dissolved oxygen shall be greater than 4.0 mg/l in segment 2-110 of the Rio Grande Basin.
  - <sup>5</sup> A bacterial standard of 200/100 ml (no more than 10% greater than 400/100 ml) was adopted for Lake McMillan in the Pecos River Basin.
  - <sup>6</sup> 50 FTU in Caballo Reservoir in the Rio Grande Basin.
  - <sup>7</sup> Based on historical data, the maximum temperature for the Pecos River between Malaga and Tansil Lake has been established at 34 C.



*Appendix B: Title 40 Part 35  
Section 1521-6, Planning on Indian  
Lands*

## § 35.1521-5

ment facility needs in accordance with guidance of EPA and the State.

(2) Establishing priority lists for construction grants is a State responsibility. Priority lists are developed annually by States, generally with funding under section 108 of the Act, and are not part of the WQM plan. However, the State may use its WQM plan and planning process during development of the priority list, as long as the requirements of § 35.1515 are met. The roles of State, interstate and areawide planning agencies are discussed further in § 35.1533-4(b)(3).

(3) The plan shall set forth information appropriate to support subsequent facility planning (including information on location, modification, construction, operation and maintenance of municipal facilities, suggested regional approaches, and population data developed in accordance with § 35.1511-1(e)). The plan should also propose appropriate regulatory or other programs to support wastewater facilities operation and maintenance and municipal water conservation.

(4) The plan shall set forth approaches (including any appropriate regulatory programs) to improve operation and maintenance of industrial wastewater facilities, and develop pretreatment programs under Part 403 of this chapter.

(e) Urban stormwater. The plan shall identify BMPs for urban stormwater control to achieve water quality goals. Appropriate regulatory programs to control the location, modification, and construction of facilities for municipal stormwater management must be identified (see § 35.1521-4(c)(2)). Fiscal analysis of the necessary capital and operations and maintenance expenditures must be included.

(f) Residual waste control, land disposal. The plan shall identify waste disposal needs, including BMPs, to protect water quality standards and ground water quality. Relationships of residual waste disposal needs to wastewater treatment facility needs (e.g., toxic solid waste disposal and land treatment) shall be described. The plan shall describe coordination of activities under WQM planning and the Resource Conservation and Recov-

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ery Act. Appropriate regulatory programs to control the location, modification, and construction of facilities for residual waste disposal and other program needs shall be established to achieve water quality goals. States may assume nonpoint source responsibilities from areawide agencies under this paragraph in accordance with section 208(b)(4)(A) of the Act.

*Note:* Control needs for waste disposal to protect surface and ground water from land disposal of solid waste and from hazardous waste are identified in programs under Subtitles C and D of the Resource Conservation and Recovery Act (RCRA). To avoid redundancy and inconsistency, the Regional Administrator and the State shall establish (through the State/EPA Agreement) the planning and funding responsibilities attributable to the RCRA and WQM programs. The division of responsibilities shall be in accordance with EPA guidance.

(g) Water quality standards. WQM agencies shall review State water quality standards and make any appropriate recommendations in their plans on revising such standards to meet water quality goals. The State shall consider the recommendations in the review and revision of standards under § 35.1550.

(h) Water conservation. Where appropriate, the plan should identify water conservation needs and practices to achieve and maintain water quality standards and to ensure efficiency in municipal wastewater treatment.

## § 35.1521-5 Planning responsibilities.

(a) Governor. The responsibilities of the Governor (or his designee) include:

(1) Assuring that adequate WQM planning consistent with this subpart is conducted throughout the State to control point and nonpoint pollution to meet water quality goals.

(2) Taking action necessary to correct a failure in planning of a State or areawide agency by promptly designating a replacement agency or otherwise assuring production of required planning products.

(3) Promptly taking any actions required under §§ 35.1523-3 and 35.1529.

(b) State. The responsibilities of the State planning agency, and of any

## Chapter 1—Environmental Protection Agency

## § 35.1521-6

other appropriate State agency designated by the Governor, include:

(1) Reviewing and commenting on draft areawide work programs in accordance with § 35.1513-4.

(2) To the maximum extent feasible, acting as a resource for areawide planning agencies, providing them with technical assistance, and information on BMPs and pollution control technologies.

(3) Performing planning for non-designated areas under section 208 of the Act and planning for which the State is responsible in designated areas.

(4) If designated by the Governor, promptly assuring completion of necessary additional planning following designation change. In such an event, the uncompleted work program of the replaced agency and related funding shall be examined and modified as determined by agreement between the successor agency and the Regional Administrator, consistent with the objectives of the Act.

(5) Management agency evaluation in accordance with § 35.1527.

(c) Areawide agencies. Each areawide agency shall prepare and submit an areawide WQM plan, shall revise the plan as necessary, and shall carry out all responsibilities assigned to it under any grant agreement, its approved work program, and any agreement with and guidance from the State, consistent with this subpart.

(d) Local government involvement. WQM planning agencies must assure that affected local governments are involved in WQM plan development. Therefore, no grant will be awarded under this subpart to a State or areawide planning agency unless the Regional Administrator is satisfied that adequate provisions have been made for such local government involvement (including the participation of appropriate local elected officials).

(e) Failure. Failure to meet any of the requirements of this section may result in withholding of all or part of grant funds available under sections 106, the nonconstruction related portion of 205(g), 208, or 314 of the Act and disapproval of the CPP under § 35.1509-3. 201 funds may be withheld in the circumstances described in § 35.1533-4(b).

§ 35.1521-6 *Continuing on Indian lands*

(a) (1) To the maximum extent feasible, States and areawide agencies shall coordinate with Indian tribal organizations within and adjacent to their planning areas in the development of WQM plans. Where appropriate, the Regional Administrator shall work with the State and Indian Tribe to ensure development of WQM planning on Indian lands. The WQM planning area should include all lands within the reservation regardless of ownership. Where the State finds it is unable to deal with an Indian tribal organization through designation or interagency agreement, the State and the Regional Administrator may agree to allow EPA to use a portion of 208 funds which the State would otherwise receive to support a cooperative agreement between EPA and the Indian Tribe to accomplish 208 tasks on Indian land.

(2) The State shall review the Indian Tribe's work program and work outputs for consistency with State and adjacent areawide agency work. Where the Governor determines that he or she has no authority to take action on Indian tribal plans under § 35.1523, the Governor shall, at a minimum, review and comment on the plan submission and provide his or her comments to EPA. All WQM plans for Indian lands shall be submitted to EPA for review and approval.

(b) If the State has no objection, an Indian Tribe may submit a self-designation application to EPA for approval under section 208(a)(4) of the Act.

(c) In addition, where the Regional Administrator after consultation with the State determines that a State lacks authority to carry out effective WQM planning and implementation on Indian lands, the Regional Administrator may approve a self-designation application by the Indian organization, if he or she is satisfied that:

(1) Other efforts for cooperative State/Indian effort have been unsuccessful; and

(2) The Indian tribal organization has the authority and capability to undertake effective WQM planning; and

(3) Planning by the Indian Tribe will result in implementation action to

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achieve water quality goals and be compatible with WQM planning outside the reservation.

(d) Except as otherwise approved by the Regional Administrator, modifications of existing areawide agency or area designations necessary to accommodate self-designation shall be in accordance with § 35.1519.

**§ 35.1523 Evaluation, certification, and approval of WQM plans and designation of management agencies.**

##### § 35.1523-1 General.

The terms "certify" and "certification" mean the finding by the Governor that a State or areawide WQM plan or portion meets the criteria in § 35.1523-2(b). EPA approval constitutes the finding by the Regional Administrator that the plan meets those criteria. State certification is a prerequisite for EPA approval. Failure of the State to take action within the time specified in § 35.1523-3(a) will result in EPA action as specified in § 35.1523-3(c).

##### § 35.1523-2 Plan evaluation.

(a) *Review and submission of WQM plans.* In accordance with Part 25 of this chapter and § 35.1507, each planning agency shall hold a public hearing on its proposed plan and solicit comments from the public, the advisory committee, the State, EPA, and agencies affected by the WQM plan. Affected agencies include general purpose units of local government, proposed and designated management agencies, other State and Federal agencies whose lands or programs are impacted (e.g., air, solid waste, drinking water, fish and game offices, and affected downstream or contiguous States and municipalities). Within 60 days after the public hearing, the planning agency shall submit its WQM plan or portion, and its responsiveness summary, to the Governor and EPA for their concurrent evaluation.

(b) *Evaluation criteria.* To be certified by the Governor and approved by EPA, the WQM plan or portion shall:

- (1) Be consistent with work program provisions, other relevant portions of the State/EPA Agreement, this subpart, and the Act;

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(2) Be technically sound;

(3) Be economically feasible;

(4) To the maximum extent feasible, be consistent with other relevant certified and approved WQM plans (including plans of neighboring States); and

(5) Represent substantial progress toward achievement of water quality goals (see § 35.1505).

(c) *Management agencies.* Management agencies shall satisfy requirements of § 35.1521-3(c).

##### § 35.1523-3 Plan certification; designation of management agencies.

(a) Within 120 days after receipt of the WQM plan for evaluation under § 35.1523-2, the Governor shall submit a letter to the Regional Administrator and the planning agency containing findings that the Governor certifies, or does not certify, each element of the plan. The Regional Administrator may allow the State to use up to 30 additional days. Prior to submission, the Governor shall give public notification of the intended action on the WQM plan in accordance with Part 25. If there is sufficient public interest, a public meeting may be held in accordance with Part 25 of this chapter. Plan provisions may be certified and management agencies designated with conditions. Unless otherwise specified in the conditions, the conditioned certification shall have the same status as full certification for purposes of sections 204(a), 208(d) and 208(e) of the Act. The certification letter shall be accompanied by a summary of public participation and comments received, and the Governor's response to those comments. The certification letter shall specify:

(1) Plan provisions the Governor certifies in accordance with § 35.1523-2(b), and any conditions. Where provisions are certified under this section with conditions, a schedule for completing revisions shall be included.

(2) For plan provisions the Governor does not certify, the plan revisions necessary for certification.

(3) Designated management agencies for implementing certified plan provisions, and any conditions. Where such agencies are not identified, the plan revisions necessary to obtain designation must be stated. Where the Governor designates a management agency which differs from the agency set forth in the plan, he or she shall forward with the certification letter the rationale for the selection, a summary of comments of the planning agency on the substitution, the Governor's response to those comments, and the commitment letter of the management agency (if it is a major agency under § 35.1521-3(c)(1)).

#### Chapter I—Environmental Protection Agency

#### 15.1523-4

(b) In the case of a plan or portion from an interstate area, the Governors of each State in the interstate area shall concurrently undertake the responsibilities assigned to them under paragraph (a) of this section. The Governors are encouraged to consolidate meetings and to coordinate staff review effort.

(c) Where the Regional Administrator determines that the Governor has failed without good cause to meet in a timely manner the certification requirements of paragraph (a) of this section, the Regional Administrator shall withhold an appropriate portion of funds otherwise available to the State under this subpart pending compliance with the requirements, and may suspend or terminate current funding in accordance with §§ 30.915 and 30.920 of this chapter.

(d) Disputes concerning refusal to certify plans, and certification or designation conditions, shall be handled through the conflict resolution process developed under § 35.1517.

*Note:* The 120 day period for State review and the 150 day period for EPA review run concurrently, not sequentially.

##### § 35.1523-4 EPA approval.

(a) Except as otherwise provided under paragraph (b) of this section, within 150 days after receipt of a WQM plan or portion for evaluation under § 35.1523-2, the Regional Administrator shall take action under this section. This time may be extended by an amount of time equal to the extra time given a State for review under § 35.1523-3(a). Plan recommendations may be approved and designated management agencies accepted with conditions. Unless otherwise specified in the condition, the conditioned approval or acceptance shall have the

same status as full approval or acceptance for purposes of sections 204(a), 208(d) and 208(e) of the Act. The Regional Administrator shall notify the Governor and the planning agency in writing of the following:

(1) Plan provisions approved and designated management agencies accepted, and any conditions. The Regional Administrator shall identify specific conditions approved for incorporation into NPDES permits under section 208(e), and a schedule for completion of revisions where plan conditions are approved with conditions.

(2) For plan provisions disapproved and designated management agencies not accepted, the plan revisions necessary to obtain approval and acceptance.

(b) Under section 208(c)(2) of the Act, the Regional Administrator has 120 days from date of management agency designation to refuse to accept such designation. Therefore, the Regional Administrator may require submission of information about such designations to be submitted to EPA in advance of other plan materials.

(c) Periodically, EPA shall publish notices in the Federal Register describing actions taken under this section. The notices shall specify an EPA contact for more information.

(d) (1) Approvals of WQM plans and plan elements are subject to withdrawal or modification in whole or in part when the Regional Administrator, after consultation with the Governor and with the concurrence of the Assistant Administrator for Water and Waste Management, determines such action to be necessary to meet water quality goals based on further studies or information which becomes available after approval. For example, the Regional Administrator may determine that his or her approval of a plan element containing alternatives for waste treatment should be modified in view of a later facility plan which, based on more detailed study than that contained in the WQM plan (such as a cost-effective analysis or an environmental assessment), recommends modification of the alternatives set forth in the plan.

(2) Before withdrawal or modification is effective, the Regional Administrator

*Appendix C: EPA Policy for the  
Administration of Environmental Programs on Indian Lands*

11/8/84

## EPA POLICY FOR THE ADMINISTRATION OF ENVIRONMENTAL PROGRAMS ON INDIAN RESERVATIONS

### INTRODUCTION

The President published a Federal Indian Policy on January 24, 1983, supporting the primary role of Tribal Governments in matters affecting American Indian reservations. That policy stressed two related themes: (1) that the Federal Government will pursue the principle of Indian "self-government" and (2) that it will work directly with Tribal Governments on a "government-to-government" basis.

The Environmental Protection Agency (EPA) has previously issued general statements of policy which recognize the importance of Tribal Governments in regulatory activities that impact reservation environments. It is the purpose of this statement to consolidate and expand on existing EPA Indian Policy statements in a manner consistent with the overall Federal position in support of Tribal "self-government" and "government-to-government" relations between Federal and Tribal Governments. This statement sets forth the principles that will guide the Agency in dealing with Tribal Governments and in responding to the problems of environmental management on American Indian reservations in order to protect human health and the environment. The Policy is intended to provide guidance for EPA program managers in the conduct of the Agency's congressionally mandated responsibilities. As such, it applies to EPA only and does not articulate policy for other Agencies in the conduct of their respective responsibilities.

It is important to emphasize that the implementation of regulatory programs which will realize these principles on Indian Reservations cannot be accomplished immediately. Effective implementation will take careful and conscientious work by EPA, the Tribes and many others. In many cases, it will require changes in applicable statutory authorities and regulations. It will be necessary to proceed in a carefully phased way, to learn from successes and failures, and to gain experience. Nonetheless, by beginning work on the priority problems that exist now and continuing in the direction established under these principles, over time we can significantly enhance environmental quality on reservation lands.

### POLICY

In carrying out our responsibilities on Indian reservations, the fundamental objective of the Environmental Protection Agency is to protect human health and the environment. The keynote of this effort will be to give special consideration to Tribal interests in making Agency policy, and to insure the close involvement of Tribal Governments in making decisions and managing environmental programs affecting reservation lands. To meet this objective, the Agency will pursue the following principles:

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Appendix C

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RIGHTS RESERVED

1. THE AGENCY STANDS READY TO WORK DIRECTLY WITH INDIAN TRIBAL GOVERNMENTS ON A ONE-TO-ONE BASIS (THE "GOVERNMENT-TO-GOVERNMENT" RELATIONSHIP), RATHER THAN AS SUBDIVISIONS OF OTHER GOVERNMENTS.

EPA recognizes Tribal Governments as sovereign entities with primary authority and responsibility for the reservation populace. Accordingly, EPA will work directly with Tribal Governments as the independent authority for reservation affairs, and not as political subdivisions of States or other governmental units.

2. THE AGENCY WILL RECOGNIZE TRIBAL GOVERNMENTS AS THE PRIMARY PARTIES FOR SETTING STANDARDS, MAKING ENVIRONMENTAL POLICY DECISIONS AND MANAGING PROGRAMS FOR RESERVATIONS, CONSISTENT WITH AGENCY STANDARDS AND REGULATIONS.

In keeping with the principle of Indian self-government, the Agency will view Tribal Governments as the appropriate non-Federal parties for making decisions and carrying out program responsibilities affecting Indian reservations, their environments, and the health and welfare of the reservation populace. Just as EPA's deliberations and activities have traditionally involved the interests and/or participation of State Governments, EPA will look directly to Tribal Governments to play this lead role for matters affecting reservation environments.

3. THE AGENCY WILL TAKE AFFIRMATIVE STEPS TO ENCOURAGE AND ASSIST TRIBES IN ASSUMING REGULATORY AND PROGRAM MANAGEMENT RESPONSIBILITIES FOR RESERVATION LANDS.

The Agency will assist interested Tribal Governments in developing programs and in preparing to assume regulatory and program management responsibilities for reservation lands. Within the constraints of EPA's authority and resources, this aid will include providing grants and other assistance to Tribes similar to that we provide State Governments. The Agency will encourage Tribes to assume delegable responsibilities, (i.e. responsibilities which the Agency has traditionally delegated to State Governments for non-reservation lands) under terms similar to those governing delegations to States.

Until Tribal Governments are willing and able to assume full responsibility for delegable programs, the Agency will retain responsibility for managing programs for reservations (unless the State has an express grant of jurisdiction from Congress sufficient to support delegation to the State Government). Where EPA retains such responsibility, the Agency will encourage the Tribe to participate in policy-making and to assume appropriate lesser or partial roles in the management of reservation programs.

4. THE AGENCY WILL TAKE APPROPRIATE STEPS TO REMOVE EXISTING LEGAL AND PROCEDURAL IMPEDIMENTS TO WORKING DIRECTLY AND EFFECTIVELY WITH TRIBAL GOVERNMENTS ON RESERVATION PROGRAMS.

A number of serious constraints and uncertainties in the language of our statutes and regulations have limited our ability to work directly and effectively with Tribal Governments on reservation problems. As impediments in our procedures, regulations or statutes are identified which limit our ability to work effectively with Tribes consistent with this Policy, we will seek to remove those impediments.

5. THE AGENCY, IN KEEPING WITH THE FEDERAL TRUST RESPONSIBILITY, WILL ASSURE THAT TRIBAL CONCERNS AND INTERESTS ARE CONSIDERED WHENEVER EPA'S ACTIONS AND/OR DECISIONS MAY AFFECT RESERVATION ENVIRONMENTS.

EPA recognizes that a trust responsibility derives from the historical relationship between the Federal Government and Indian Tribes as expressed in certain treaties and Federal Indian Law. In keeping with that trust responsibility, the Agency will endeavor to protect the environmental interests of Indian Tribes when carrying out its responsibilities that may affect the reservations.

6. THE AGENCY WILL ENCOURAGE COOPERATION BETWEEN TRIBAL, STATE AND LOCAL GOVERNMENTS TO RESOLVE ENVIRONMENTAL PROBLEMS OF MUTUAL CONCERN.

Sound environmental planning and management require the cooperation and mutual consideration of neighboring governments, whether those governments be neighboring States, Tribes, or local units of government. Accordingly, EPA will encourage early communication and cooperation among Tribes, States and local governments. This is not intended to lend Federal support to any one party to the jeopardy of the interests of the other. Rather, it recognizes that in the field of environmental regulation, problems are often shared and the principle of comity between equals and neighbors often serves the best interests of both.

7. THE AGENCY WILL WORK WITH OTHER FEDERAL AGENCIES WHICH HAVE RELATED RESPONSIBILITIES ON INDIAN RESERVATIONS TO ENLIST THEIR INTEREST AND SUPPORT IN COOPERATIVE EFFORTS TO HELP TRIBES ASSUME ENVIRONMENTAL PROGRAM RESPONSIBILITIES FOR RESERVATIONS.

EPA will seek and promote cooperation between Federal agencies to protect human health and the environment on reservations. We will work with other agencies to clearly identify and delineate the roles, responsibilities and relationships of our respective organizations and to assist Tribes in developing and managing environmental programs for reservation lands.

8. THE AGENCY WILL STRIVE TO ASSURE COMPLIANCE WITH ENVIRONMENTAL STATUTES AND REGULATIONS ON INDIAN RESERVATIONS.

In those cases where facilities owned or managed by Tribal Governments are not in compliance with Federal environmental statutes, EPA will work cooperatively with Tribal leadership to develop means to achieve compliance, providing technical support and consultation as necessary to enable Tribal facilities to comply. Because of the distinct status of Indian Tribes and the complex legal issues involved, direct EPA action through the judicial or administrative process will be considered where the Agency determines, in its judgment, that: (1) a significant threat to human health or the environment exists, (2) such action would reasonably be expected to achieve effective results in a timely manner, and (3) the Federal Government cannot utilize other alternatives to correct the problem in a timely fashion.

In those cases where reservation facilities are clearly owned or managed by private parties and there is no substantial Tribal interest or control involved, the Agency will endeavor to act in cooperation with the affected Tribal Government, but will otherwise respond to noncompliance by private parties on Indian reservations as the Agency would to noncompliance by the private sector elsewhere in the country. Where the Tribe has a substantial proprietary interest in, or control over, the privately owned or managed facility, EPA will respond as described in the first paragraph above.

9. THE AGENCY WILL INCORPORATE THESE INDIAN POLICY GOALS INTO ITS PLANNING AND MANAGEMENT ACTIVITIES, INCLUDING ITS BUDGET, OPERATING GUIDANCE, LEGISLATIVE INITIATIVES, MANAGEMENT ACCOUNTABILITY SYSTEM AND ONGOING POLICY AND REGULATION DEVELOPMENT PROCESSES.

It is a central purpose of this effort to ensure that the principles of this Policy are effectively institutionalized by incorporating them into the Agency's ongoing and long-term planning and management processes. Agency managers will include specific programmatic actions designed to resolve problems on Indian reservations in the Agency's existing fiscal year and long-term planning and management processes.



William D. Ruckelshaus



*Appendix D: Fiscal Year 1986 Work Plan  
of the Surveillance and Standards Section,  
New Mexico Environmental Improvement Division*

## 2.0. SURVEILLANCE AND STANDARDS SECTION

### 2.1. Introduction

Section 106(e)(1) of the federal Clean Water Act requires the states to establish appropriate monitoring methods in order to compile and analyze data on the quality of "waters of the United States." In compliance with Section 106 of the CWA, the Surveillance and Standards Section will pursue the water monitoring activities and other program elements identified in paragraphs 2.2.A. - 2.2.M. of the "State of New Mexico's Water Pollution Control Program for FY 86." These monitoring activities assist the Surface Water Quality Bureau in meeting responsibilities incurred under Sections 106, 201, 205(j), 303, 305(b), and 401 of the CWA. For example, the program provides water quality data needed to: revise water quality standards, establish water-body priorities, develop waste load allocations, and TMDLs pursuant to Section 303; develop water-quality based effluent limitations pursuant to Sections 302 and 401; rank Section 201 construction grants projects in order of priority pursuant to Section 303(e)(3)(H); assess the efficacy of water pollution controls and determine water quality trends, and prepare annual and biennial reports to the U.S. Congress pursuant to Sections 205(j) and 305(b).

### 2.2. Program Elements

During FY 86 the section will give priority to water-data acquisition and computer-based data management in support of the following program activities (see Appendix A for details of the water quality monitoring program). The Surveillance and Standards Section will:

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*Appendix D*

A. Conduct eight intensive surveys of priority river reaches; write technical reports assessing the impacts of wastewater effluents and nonpoint sources of contaminants on the chemical and biological integrity of these streams.

B. Conduct four reconnaissance surveys of stream reaches where data are lacking in order to supplement fixed-station monitoring; write abstracts presenting station locations, methods, and salient results of these surveys.

C. Collect, identify, and enumerate benthic macroinvertebrates in selected stream reaches in conjunction with paragraphs A and B and write technical reports presenting these results.

D. Review the state's water quality standards and propose revisions, as needed, pursuant to Section 303(c) of the Clean Water Act. Prior to the next triennial review, the section will endeavor to complete the following work elements:

a) consider developing language modifying the applicability of paragraph 1-102, General Standards;

b) provide information specifying the procedure by which the state will regulate point source discharges of toxic pollutants based on the narrative criteria of paragraph 1-102.F, Hazardous Substances, by March 30, 1986;

c) conduct further studies to address the requirements of 40 CFR 131.11(a)(2), i.e., numeric standards for toxic pollutants, undertaken as a Section 205(j) task (refer to "Third Section 205(j) Program Plan," dated May 1985);

d) investigate the subject of low-flow and low-volume criteria below which numeric and narrative standards are not applicable (refer to "Third Section 205(j) Program Plan," dated May 1985);

e) examine the feasibility of adopting numeric water quality standards to support the use of primary contact recreation for the 27 stream segments presently protected for secondary contact only, these segments are: 101, 103, 105, 108, 110, 111, 113, 115, 201, 202, 204, 206, 207, 208, 211, 213, 301, 303, 305, 401, 402, 403, 404, 501, 502, 601, and 602 to be completed prior to the next triennial review;

f) obtain information, as needed, to propose classification of the twenty perennial water courses identified in the tables enclosed with C. Nylander's letter to Robert B. Elliott, dated February 20, 1985, targeted for completion by September 30, 1986; and

g) examine the feasibility of classifying the eight "perennial" reservoirs identified in the above-referenced tables, by September 30, 1987.

E. Develop and recommend as appropriate wasteload allocations for point sources in water quality limited stream segments of the state in conjunction with activities A-C.

F. Evaluate the impact of point and nonpoint sources of nutrients on Elephant Butte Reservoir, and maintain a current data base for this reservoir by quarterly sampling at three stations pursuant to the stipulated court agreement in Mountain View Community Improvement Association vs. Robert W. Fri, et al. The target date for completion of this report is March 30, 1986.

G. Write a project completion report assessing the effect of municipal wastewater effluents from the cities of Espanola and Santa Fe and from Los Alamos County on Cochiti Reservoir in accordance with the work plan developed for the FY 84 Section 106 grant. The target date for completion of this report is December 30, 1985.

H. Review and comment on proposed amendments to the Clean Water Act and regulations pursuant to the Act.

I. Support enforcement actions initiated by the Surface Water Section against noncomplying dischargers by collecting chemical and biological data in the stream reaches receiving the wastewater effluents.

J. Transfer all water quality data collected by the Surveillance Section to STORET using the in-house terminals of the bureau linked by telephone modems to the computer facilities of the EPA at Research Triangle Park, NC.

K. Retrieve water quality data from STORET and execute programs to perform advanced statistical analyses of these data as needed by bureau staff for reports and symposium presentations.

L. Work toward achieving a coordinated monitoring program involving agencies in the state routinely collecting water quality data. The desired instrument for planning and coordinating these efforts is a "Memorandum of Understanding" between the bureau and each agency involved in fixed-station monitoring.

M. Update the "Quality Assurance Project Plan for Water Pollution Control" by April 1, 1986.

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Commit-</u> <u>ment</u>
No. of Intensive Surveys Conducted w/Intensive Survey Abstracts Filed	0	0	2	0	0	2	0	0	2	0	2	0	8
No. of Reconnaissance-Surveys Conducted w/Abstracts Filed	1			1			1			1			4
No. of Designated State Ambient Fixed Stations with Current (3 mo) Data Stored	3	3	3	3	3	3	3	3	3	3	3	3	3

## APPENDIX A

### New Mexico Water Monitoring Program

#### 1) Ambient Monitoring Stations

The water quality surveillance network in New Mexico consists of eleven stream stations and three reservoir stations as listed below:

STORET STATION CODE	LOCATION
07221500	Canadian River near Sanchez
08276500	Rio Grande below Taos Bridge
08313000	Rio Grande at Otowi Bridge ✓
08319000	Rio Grande at San Felipe ✓
08331000	Rio Grande at Isleta ✓
08354800	Rio Grande at San Acacia
08358300	Rio Grande at San Marcial
08383500	Pecos River at Puerto de Luna
08386000	Pecos River near Acme
08396500	Pecos River at Artesia
09368000	San Juan River at Shiprock ✓
EKT	Elephant Butte Reservoir at Kettle Top
EBD	Elephant Butte Reservoir at the Dam
EH1	Elephant Butte Reservoir at Horse Island

Stream stations are sampled bimonthly or quarterly for the following parameters:

STORET CODE	
00010	Water temperature (C°)
00300	Dissolved oxygen (mg/l)
00400	pH (Standard units)
00095	Specific conductance (umho @ 25°C)
31616	Fecal coliform bacteria (col/100 ml)
00625	Total Kjeldahl nitrogen (mg/l)
00630	Nitrate + nitrite nitrogen (mg/l)
00665	Total phosphorus (mg/l)
00335	Chemical oxygen demand (mg/l)
00530	Total non-filterable residue (mg/l)
00060	Flow (cfs) or 00061 Flow, instantaneous (cfs)

Total concentrations of the trace elements arsenic (01002), cadmium (01027), copper (01042), chromium (01034), lead (01051), and mercury (71900) and other trace elements are monitored on a semiannual basis at all stream stations.

Whole water and bottom material samples are collected annually at stream stations and analyzed for all trace organic parameters listed in the BMP except pentachlorophenol and the cis and trans isomers of nonachlor; laboratory capabilities for these parameters have not yet been developed by the U.S. Geological Survey laboratory which supports this sampling effort.

Reservoir stations are sampled quarterly for the following parameters:

STORET CODE

00010	Temperature (°C depth profile)
00300	Dissolved oxygen (mg/l, depth profile)
00400	pH (standard units, surface only)
00095	Specific conductance (umho @ 25°C, depth profile))
31616	Fecal coliform bacteria (colonies/100 ml, surface only)
00625	Total Kjeldahl nitrogen (mg/l, euphotic zone only)
00630	Nitrate + nitrite nitrogen (mg/l, euphotic zone only)
00665	Total phosphorus (mg/l, euphotic zone only)
00530	Total non-filterable residue (mg/l, euphotic zone only))
00077 (or 00078)	Secchi disc transparency (inches or meters)
00034	Depth of 1% illumination (meters)
32210	Chlorophyll a, uncorrected (ug/l, euphotic zone)

All data from the water quality surveillance stations are placed on STORET. This is normally accomplished within 90 days, unless problems are encountered with the interface between the U.S. Geological Survey WATSTOR system (where stream data are initially stored by the USGS) and the EPA STORET system at headquarters level. The Surface Water Quality Bureau, however, has no managerial control over the transfer of these data to the STORET system, and thus assumes no responsibility for the scheduling of this activity. Reservoir data are stored directly by surveillance personnel and generally appear on STORET within 60 days after sampling.

- 2) The selection of river reaches for intensive surveys is made according to the state's "Ranking System for New Mexico Priority Stream Segments" (revised July 1985). Based on this waterbody ranking system, the bureau has selected eight river reaches to receive intensive water quality surveys during FY 86. This list is subject to revision in response to new information.

<u>Survey Reaches</u>	<u>Segment No.</u>
• Rio Chamita from above the village of Chama to its mouth	2-116
• Pecos River between Roswell and Artesia	2-206
• Santa Fe River from above Siler Road to Cochiti Reservoir	2-110
• Pecos River near Santa Rosa	2-211
• Rio Hondo from the Taos Ski Valley to NM Highway 3	2-120 ✓
• Rio San Jose from Grants to below Horace Springs	2-107 ✓
• Gallinas River near the city of Las Vegas	2-212
• Upper Red River from Middle Fork to NM Highway 3	2-120

During the planning phase preceding each survey, the surveillance team will select sampling station locations, determine parametric coverage, set sampling dates and times, and identify specific information needs that should be considered in planning the survey.

3) Biological Monitoring

A biological monitoring effort using appropriate quantitative sampling techniques is planned for FY 86 in conjunction with intensive river surveys. The samplers and methods to be used during intensive surveys may include: (1) the barbeque basket sampler (Mason et al. 1968; Jacobi 1971), (2) the unit-effort traveling kick method (Hornig and Pollard 1977), and (3) the modified Hess circular sampler (Jacobi 1978).

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Hornig, C.E., and J.E. Pollard. 1977. Macroinvertebrate sampling techniques for streams in semi-arid regions. Comparison of the Surber method and a unit effort traveling kick method. USEPA, Environmental Monitoring and Support Laboratory. Las Vegas, Nevada. 21 pp. mimeo.



- Jacobi, G.Z. 1971. A quantitative artificial substrate sampler for benthic macroinvertebrates. Trans. Amer. Fish. Soc. 100: 136-158.
- Jacobi, G.Z. 1978. An inexpensive circular sampler for collecting benthic macroinvertebrates in streams. Arch. Hydrobiol. 83: 126-131.
- Mason, W.T., J.B. Anderson, and G.E. Morrison. 1967. A limestone filled artificial substrate sampler-float unit for collecting macroinvertebrates in large streams. Prog. Fish-Cult. 29: 74.

*Appendix E: New Mexico Water Quality  
Control Commission Regulations - Part I*

WATER QUALITY CONTROL COMMISSION  
Post Office Box 968  
Santa Fe, New Mexico 87504-0968  
Phone: (505) 984-0020, Ext. 318

WATER QUALITY CONTROL COMMISSION REGULATIONS

PART 1

General Provision and Procedures

1-100. GENERAL PROVISIONS.

1-101. DEFINITIONS.--As used in the Water Quality Control Commission Regulations:

A. "abandoned well" means a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be rehabilitated for its intended purpose or other purposes including monitoring and observation;

B. "agency" or "division" means the environmental improvement division of the New Mexico health and environment department;

C. "barrier well" means a well used to inject fluids into ground water to prevent the intrusion of saline or contaminated water into ground water of better quality;

D. "board" means the Utility Operators Certification Advisory Board;

E. "casing" means pipe or tubing of appropriate material, diameter and weight used to support the sides of a well hole and thus prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent fluid from entering or leaving the well other than to or from the injection zone;

F. "cementing" means the operation whereby a cementing slurry is pumped into a drilled hole and/or forced behind the casing;

G. "certification act" means the Utility Operators Certification Act, Section 61-30-1 et seq., NMSA 1978;

H. "certified operator" means a person who is certified by the commission as being qualified to supervise or operate one of the classifications of water supply systems or wastewater facilities;

I. "collapse" means the structural failure of overlying materials caused by removal of underlying materials;

J. "collection system" means pipelines or conduits, pumping stations, force mains, and all other devices, appurtenances and facilities used for collecting and conducting waste to a point of treatment and disposal;

K. "commission" means the New Mexico water quality control commission;

L. "confining zone" means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement from an injection zone;

M. "conventional mining" means the production of minerals from an open pit or underground excavation. Underground excavations include mine shafts, workings and air vents, but does not include excavations primarily caused by in situ extraction activities.

N. "daily composite sample" means a sample collected over any twenty-four hour period at intervals not to exceed one hour and obtained by combining equal volumes of the effluent collected, or means a sample collected in accordance with federal permit conditions where a permit has been issued under the National Pollutant Discharge Elimination System or for those facilities which include a waste stabilization pond in the treatment process where the retention time is greater than twenty (20) days, means a sample obtained by compositing equal volumes of at least two grab samples collected within a period of not more than twenty-four (24) hours;

O. "director" means the director of the New Mexico environmental improvement division or the director of a constituent agency designated by the commission;

P. "~~discharge plan~~" means a description of methods and conditions, including any monitoring and sampling requirements, for the discharge of effluent or leachate which may move directly or indirectly into ground water;

Q. "disposal" means to abandon, deposit, inter or otherwise discard a fluid as a final action after its use has been achieved;

R. "distribution system" means pipelines, appurtenances, devices and facilities which carry potable water under pressure to each consumer;

S. "drainage well" means a well used to drain storm runoff into a subsurface formation;

T. "education" means academic credit received attending any public or private primary, secondary or high school, approved vocational training courses in the water supply and wastewater field, college or university;

U. "effluent disposal well" means a well which is used for the disposal of fluids which may have the potential to cause water pollution. Wells used in the following practices are not effluent disposal wells: conventional mining, old stope leaching and sand backfilling. Wells where the emplacement of fluids is limited to natural ground water seeping or flowing into conventional mine workings are not effluent disposal wells. Barrier wells, drainage wells, recharge wells, and return flow wells are not effluent disposal wells if the discharger can demonstrate that the discharge will not adversely affect the health of persons, and

1. the injection fluid does not contain a contaminant which may cause an exceedance at any place of present or reasonable foreseeable future use of any primary state drinking water maximum contaminant level as specified in the "Water Supply Regulations" adopted by the Environmental Improvement Board under the Environmental Improvement Act; or

2. the discharger can demonstrate that the injection will result in an overall or net improvement in water quality as determined by the director.

V. "experience" means actual work experience, full or part-time, in the fields of potable water supply or wastewater treatment. Work experience in a related field may be accepted at the discretion of the commission;

W. "experimental technology" means a technology which has not been proven feasible under the conditions in which it is being tested;

X. "fluid" means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state;

Y. "ground water" means interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply;

Z. "hazard to public health" exists when water which is used or is reasonably expected to be used in the future as a human drinking water supply exceeds at the time and place of such use, one or more of the numerical standards of Subsection 3-103.A, or the naturally occurring concentrations, whichever is higher, or if any toxic pollutant affecting human health is present in the water. In determining whether a discharge would cause a hazard to public health to exist, the director shall investigate and consider the purification and dilution reasonably expected to occur from the time and place of discharge to the time and place of withdrawal for use as human drinking water;

AA. "injection" means the subsurface emplacement of fluids through a well;

BB. "injection zone" means a geological formation, group of formations, or part of a formation receiving fluids through a well;

CC. "in situ extraction well" means a well which injects fluids for mineral extraction, except 1) conventional mines, 2) old stope leaching, 3) the extraction of oil, natural gas, or gas extracted from coal gasification, 4) wells for which the discharger can demonstrate use as part of an experimental technology;

DD. "old stope leaching" means the circulation of waters through the mined areas of conventional mines with or without the addition of chemicals, for the purpose of extraction of minerals;

EE. "operational area" means a geographic area defined in a project discharge plan where a group of wells or well fields in close proximity comprise a single in situ extraction well operation;

FF. "operator" means any person employed by the owner as the person responsible for the operation of all or any portion of a water supply system or wastewater facility. Not included in this definition are such persons as directors of public works, city engineers, city managers, or other officials or persons whose duties do not include actual operation or direct supervision of water supply systems or wastewater facilities;

GG. "owner" means the person or persons having the responsibility of managing or maintaining a water supply system or a wastewater facility;

HH. "packer" means a device lowered into a well to produce a fluid-tight seal within the casing;

II. "person" means the state or any agency, institution, commission, municipality, or other political subdivision thereof, federal agency, public or private corporation, individual, partnership, association or other entity, and includes any officer or governing or managing body of any institution, political subdivision, agency or public or private corporation;

JJ. "petitioner" means a person seeking a variance from a regulation of the Commission pursuant to Section 74-6-4(G) NMSA 1978;

KK. "plugging" means the act or process of stopping the flow of water, oil or gas into or out of a geological formation, group of formations or part of a formation through a borehole or well penetrating these geologic units;

LL. "population served" means actual or estimated maximum number of persons served by the water supply system or wastewater facility;

MM. "project discharge plan" means a discharge plan which describes the operation of similar in situ extraction wells or well fields within one or more individual operational areas;

NN. "recharge well" means a well used to inject fluids for the replenishment of ground water, including use to reclaim or improve the quality of existing ground water, or to eliminate subsidence associated with the overdraft of fresh water;

OO. "refuse" includes food, swill, carrion, slops and all substances from the preparation, cooking and consumption of food and from the handling, storage and sale of food products, the carcasses

of animals, junked parts of automobiles and other machinery, paper, paper cartons, tree branches, yard trimmings, discarded furniture, cans, oil, ashes, bottles and all unwholesome material;

PP. "return flow well" means a well used to return to the supply aquifer, or to other ground water, the water used for heating or cooling for any purpose provided that the water does not receive any additional chemical or biological water contaminants other than heat or the absence thereof;

QQ. "sand backfilling" means the injection of a mixture of water and sand, mill tailings or other solids into underground conventional mines;

RR. "sewer system" means pipelines, conduits, pumping stations, force mains, or other structures, devices, appurtenances or facilities used for collecting or conducting wastes to an ultimate point for treatment or disposal;

SS. "sewerage system" means a system for disposing of wastes, either by surface or underground methods, and includes sewer systems, treatment works, disposal wells and other systems;

TT. "TDS" means total dissolved solids as determined by the "calculation method" (sum of constituents), by the "residue on evaporation method at 180°" of the "U.S. Geological Survey Techniques of Water Resource Investigations," or by conductivity, as the director may determine;

UU. "toxic pollutant" means a water contaminant or combination of water contaminants in concentration(s) which, upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains, will unreasonably threaten to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit. As used in this definition injuries to health include death, histiopathologic change, clinical symptoms of disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring. In order to be considered a toxic pollutant a contaminant must be one of the potential toxic pollutants listed below and be at a concentration shown by scientific information currently available to the public to have potential for causing one or more of the effects listed above.



Any water contaminant or combination of the water contaminants in the list below creating a lifetime risk of more than one cancer per 100,000 exposed persons is a toxic pollutant.

- acrolein
- acrylonitrile
- aldrin
- benzene
- benzidine
- carbon tetrachloride
- chlordane
- chlorinated benzenes
  - monochlorobenzene
  - hexachlorobenzene
  - pentachlorobenzene
  - 1,2,4,5-tetrachlorobenzene
- chlorinated ethanes
  - 1,2-dichloroethane
  - hexachloroethane
  - 1,1,2,2-tetrachloroethane
  - 1,1,1-trichloroethane
  - 1,1,2-trichloroethane
- chlorinated phenols
  - 2,4-dichlorophenol
  - 2,4,5-trichlorophenol
  - 2,4,6-trichlorophenol
- chloroalkyl ethers
  - bis (2-chloroethyl) ether
  - bis (2-chloroisopropyl) ether
  - bis (chloromethyl) ether
- chloroform
- DDT
- dichlorobenzene
- dichlorobenzidine
- 1,1-dichloroethylene
- dichloropropenes
- dieldrin
- 2,4-dinitrotoluene
- diphenylhydrazine
- endosulfan
- endrin
- ethylbenzene
- halomethanes
  - bromodichloromethane
  - bromomethane

chloromethane  
dichlorodifluoromethane  
dichloromethane  
tribromomethane  
trichlorofluoromethane  
heptachlor  
hexachlorobutadiene  
hexachlorocyclohexane (HCH)  
    alpha-HCH  
    beta-HCH  
    gamma-HCH  
    technical HCH  
hexachlorocyclopentadiene  
isophorone  
nitrobenzene  
nitrophenols  
    2,4-dinitro-o-cresol  
    dinitrophenols  
nitrosamines  
    N-nitrosodiethylamine  
    N-nitrosodimethylamine  
    N-nitrosodibutylamine  
    N-nitrosodiphenylamine  
    N-nitrosopyrrolidine  
pentachlorophenol  
phenol  
phthalate esters  
    dibutyl phthalate  
    di-2-ethylhexyl phthalate  
    diethyl phthalate  
    dimethyl phthalate  
polychlorinated biphenyls (PCB's)  
polynuclear aromatic hydrocarbons (PAH)  
    anthracene  
    3,4-benzofluoranthene  
    benzo(k) fluoranthene  
    fluoranthene  
    fluorene  
    phenanthrene  
    pyrene  
tetrachloroethylene  
toluene  
toxaphene  
trichloroethylene  
vinyl chloride

VV. "training" means the non-academic training in the field of water supply or wastewater;

WW. "training credit" means the amount of credit earned by a participant in a training program;

XX. "treatment works" means any plant or other works used for the purpose of treating, stabilizing or holding wastes;

YY. "wastes" means sewage, industrial wastes, or any other liquid gaseous or solid substance which will pollute any waters of the state;

ZZ. "wastewater facility" means a system of structures, equipment and processes designed to collect and treat domestic and industrial wastes and dispose of the effluents from a public system;

AAA. "water" means all water including water situated wholly or partly within or bordering upon the state, whether surface or subsurface, public or private, except private waters that do not combine with other surface or subsurface water;

BBB. "water contaminant" means any substance which alters the physical, chemical or biological qualities of water;

CCC. "water supply system" means a system of pipes, structures and facilities through which potable water is obtained, treated and distributed to the public;

DDD. "watercourse" means any river, creek, arroyo, canyon, draw, or wash, or any other channel having definite banks and beds with visible evidence of the occasional flow of water;

EEE. "well" means a bored, drilled or driven shaft, or a dug hole, whose depth is greater than the largest surface dimension;

FFF. "well stimulation" means a process used to clean the well, enlarge channels, and increase pore space in the interval to be injected, thus making it possible for fluids to move more readily into the injection zone. Well stimulation includes, but is not limited to, (1) surging, (2) jetting, (3) blasting, (4) acidizing, (5) hydraulic fracturing.

1-200. PROCEDURES.

1-201. NOTICE OF INTENT TO DISCHARGE.

A. Any person intending to make a new water contaminant discharge or to alter the character or location of an existing water contaminant discharge, unless the discharge is being made or will be made into a community sewer system or subject to the Liquid Waste Disposal Regulations adopted by the New Mexico Environmental Improvement Board, shall file a notice with the Water Pollution Control Bureau of the Environmental Improvement Division. However, notice regarding discharges from facilities for the production, refinement and pipeline transmission of oil and gas, or products thereof, shall be filed instead with the Oil Conservation Commission.

B. Notices shall state:

1. the name of the person making the discharge;
2. the address of the person making the discharge;
3. the location of the discharge;
4. an estimate of the concentration of water contaminants in the discharge; and
5. the quantity of the discharge.

1-202. FILING OF PLANS AND SPECIFICATIONS--SEWERAGE SYSTEMS.

A. Any person proposing to construct a sewerage system or proposing to modify any sewerage system in a manner that will change substantially the quantity or quality of the discharge from the system shall file plans and specifications of the construction or modification with the Water Pollution Control Bureau of the Environmental Improvement Division. Modifications having a minor effect on the character of the discharge from sewerage systems shall be reported as of January 1st and June 30th of each year to the Water Pollution Control Bureau.

B. Plans, specifications and reports required by this section, if related to facilities for the production, refinement and pipeline transmission of oil and gas, or products thereof, shall be filed instead with the Oil Conservation Commission.

*Appendix F: 33 USC #1285 J,  
Water Quality Management Plan*

subsection (c) of this section, except that in the case of Guam, Virgin Islands, American Samoa, and the Trust Territories not more than thirty-three one-hundredths of 1 per centum in the aggregate shall be allotted to all four of these jurisdictions. For the purpose of carrying out this subsection there are authorized to be appropriated, subject to such amounts as are provided in appropriation Acts, not to exceed \$75,000,000 for each of fiscal years 1978, 1979, 1980, 1981, 1982, 1983, 1984, and 1985. If for any fiscal year the amount appropriated under authority of this subsection is less than the amount necessary to carry out this subsection, the amount each State receives under this subsection for such year shall bear the same ratio to the amount such State would have received under this subsection in such year if the amount necessary to carry it out had been appropriated as the amount appropriated for such year bears to the amount necessary to carry out this subsection for such year.

[See main volume for text of (f)]

(g) *Reservation of funds; State management assistance*

(1) The Administrator is authorized to reserve each fiscal year not to exceed 2 per centum of the amount authorized under section 1287 of this title for purposes of the allotment made to each State under this section on or after October 1, 1977, except in the case of any fiscal year beginning on or after October 1, 1981, and ending before October 1, 1985, in which case the percentage authorized to be reserved shall not exceed 4 per centum, or \$400,000 whichever amount is the greater. Sums so reserved shall be available for making grants to such State under paragraph (2) of this subsection for the same period as sums are available from such allotment under subsection (d) of this section, and any such grant shall be available for obligation only during such period. Any grant made from sums reserved under this subsection which has not been obligated by the end of the period for which available shall be added to the amount last allotted to such State under this section and shall be immediately available for obligation in the same manner and to the same extent as such last allotment. Sums authorized to be reserved by this paragraph shall be in addition to and not in lieu of any other funds which may be authorized to carry out this subsection.

[See main volume for text of (2); (h)]

(i) *Increase in Federal share for construction; projects utilizing innovative processes and techniques*

Not less than one-half of one per centum of funds allotted to a State for each of the fiscal years ending September 30, 1979, September 30, 1980, September 30, 1981, September 30, 1982, September 30, 1983, September 30, 1984, and September 30, 1985, under subsection (a) of this section shall be expended only for increasing the Federal share of grants for construction of treatment works utilizing innovative processes and techniques pursuant to section 1282(a)(2) of this title. Including the expenditures authorized by the preceding sentence, a total of two per centum of the funds allotted to a State for each of the fiscal years ending September 30, 1979, and September 30, 1980, and 3 per centum of the funds allotted to a State for the fiscal year ending September 30, 1981, under subsection (a) of this section shall be expended only for increasing grants for construction of treatment works from 75 per centum to 85 per centum pursuant to section 1282(a)(2) of this title. Including the expenditures authorized by the first sentence of this subsection, a total (as determined by the Governor of the State) of not less than 4 per centum nor more than 7½ per centum of the funds allotted to such State for any fiscal year beginning after September 30, 1981, under subsection (c) of this section shall be expended only for increasing the Federal share of grants for construction of treatment works pursuant to section 1282(a)(2) of this title.

(j) *Water quality management plan*

(1) The Administrator shall reserve each fiscal year not to exceed 1 per centum of the sums allotted and available for obligation to each State under this section for each fiscal year beginning on or after October 1, 1981, or \$100,000, whichever amount is the greater.

(2) Such sums shall be used by the Administrator to make grants to the States to carry out water quality management planning, including, but not limited to—

(A) identifying most cost effective and locally acceptable facility and point measures to meet and maintain water quality standards;

(B) developing an implementation plan to obtain State and local financial and regulatory commitments to implement measures developed under subparagraph (A);

(C) determining the nature, extent, and causes of water quality problems in various areas of the State and interstate region, and reporting on these annually; and

(D) determining those publicly owned treatment works which should be constructed with assistance under this subchapter, in which areas and in what sequence, taking into account the relative degree of effluent reduction attained, the relative contributions to water quality of other point or nonpoint sources, and the consideration of alternatives to such construction, and implementing section 1313(e) of this title.

(3) In carrying out planning with grants made under paragraph (2) of this subsection, a State shall develop jointly with local, regional, and interstate entities, a plan for carrying out the program and give funding priority to such entities and designated or undesignated public comprehensive planning organizations to carry out the purposes of this subsection.

(4) All activities undertaken under this subsection shall be in coordination with other related provisions of this chapter.

(k) *New York City Convention Center*

The Administrator shall allot to the State of New York from sums authorized to be appropriated for the fiscal year ending September 30, 1982, an amount necessary to pay the entire cost of conveying sewage from the Convention Center of the city of New York to the Newtown sewage treatment plant, Brooklyn-Queens area, New York. The amount allotted under this subsection shall be in addition to and not in lieu of any other amounts authorized to be allotted to such State under this chapter.

(As amended Oct. 21, 1980, Pub.L. 96-483, § 11, 94 Stat. 2363; Dec. 29, 1981, Pub.L. 97-117, §§ 8(c), 13-16, 95 Stat. 1625, 1627-1629.)

**Codification.** Section 8(c) of Pub. L. 97-117 directed in part that subsec. (i) be amended by striking out the phrase "from 75 per centum to 85 per centum". Since this phrase appeared twice in subsec. (i), the amendment was executed by striking it out the first time it appeared, as the probable intent of Congress.

**1981 Amendment.** Subsec. (c). Pub. L. 97-117, § 13(a), designated existing provision as par. (1) and added par. (2).

**Subsec. (c).** Pub. L. 97-117, § 13(b), substituted "1981, 1982, 1983, 1984, and 1985" for "and 1981" in two places.

**Subsec. (g)(1).** Pub. L. 97-117, § 14, inserted "except in the case of any fiscal year beginning on or after October 1, 1981, and ending before October 1, 1985, in which case the percentage authorized to be reserved shall not exceed 4 per centum," following "October 1, 1977," and provision that sums authorized to be reserved be in addition to and not in lieu of any other funds which may be authorized to carry out this subsection.

**Subsec. (i).** Pub. L. 97-117, § 8(c), substituted "September 30, 1981, September 30, 1982, September 30, 1983, September 30, 1984, and September 30, 1985" for "and September 30, 1981", struck out "from 75 per centum to 85 per centum" following "innovative processes and techniques", and inserted provision that including the expenditures authorized by the first sentence of this subsection, a total, as determined by the State Governor, of not less than 4 per centum nor more than 7½ per centum of the funds allotted to such State for any fiscal year beginning after Sept. 30,

1981, under subsec. (c) of this section be expended only for increasing the Federal share of grants for construction of treatment works pursuant to section 1282(a)(2) of this title. See Codification note above.

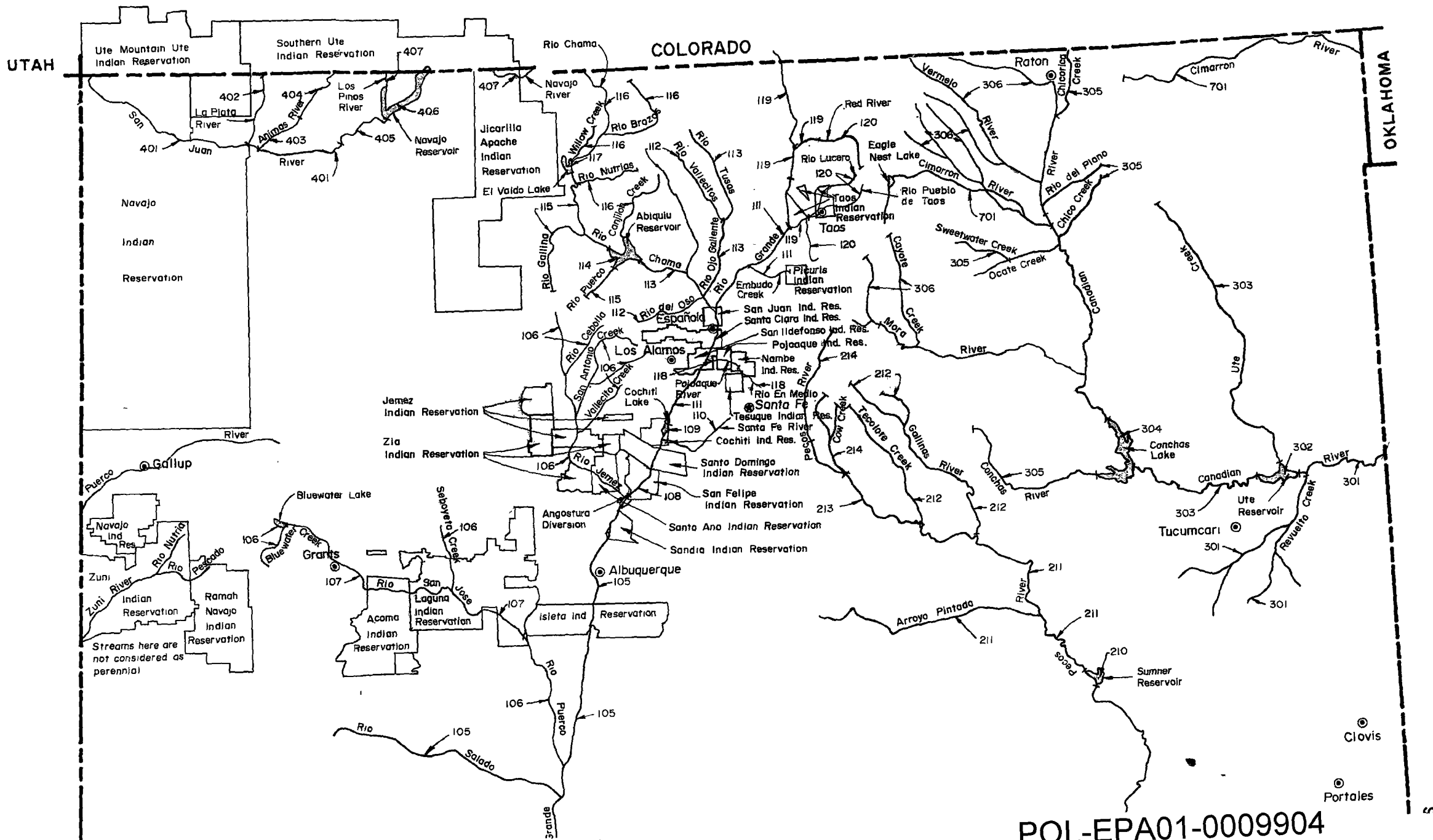
**Subsec. (j).** Pub. L. 97-117, § 15, added subsec. (j).

**Subsec. (k).** Pub. L. 97-117, § 16, added subsec. (k).

**1980 Amendment.** Subsec. (g)(1). Pub. L. 96-483 added "of the amount authorized under section 1287 of this title for purposes" following "2 per centum".

**Limitation on Authorization of Appropriations and Allotment to States for Fiscal Year 1982.** Pub. L. 97-35, Title XVIII, § 1801(b), Aug. 13, 1981, 95 Stat. 764, provided that: "There is authorized to be appropriated to the Administrator of the Environmental Protection Agency for the fiscal year ending September 30, 1982, not to exceed \$40,000,000 to carry out section 205(g) of the Federal Water Pollution Control Act (subsec. (g) of this section). The Administrator shall make such authorization available to the States in accordance with such section 205(g) in the same manner and to the same extent as would be the case if \$2,000,000,000 had been authorized under section 207 of such Act [section 1287 of this title], using the same allotment table as was applicable to the fiscal year ending September 30, 1981."

**Availability of Allotted Sums in Subsequent Years; Reallocation of Unobligated Sums.** Section 7 of Pub. L. 96-483 provided that: "Notwithstanding section 205(d) of the Federal Water Pol-



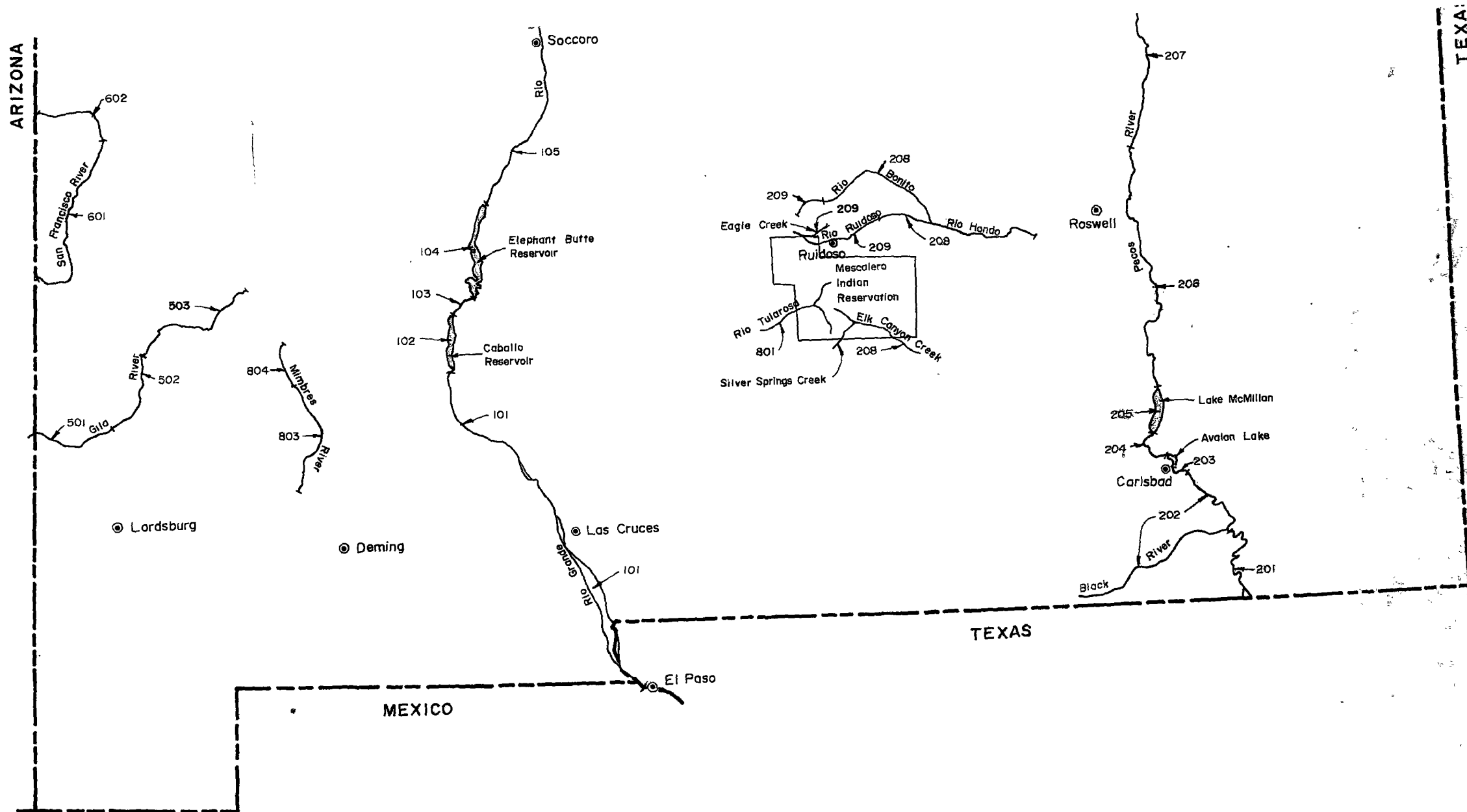


FIGURE 1.-Selected Stream Segments Designated by the New Mexico Water Quality Control Commission as of February 1985 and Locations of Indian Trust Lands in New Mexico.

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